VPN Internet Gateway

User's Manual

CONTENTS

CHAPTER 1: INTRODUCTION

Features 4
Package Contents 5
Minimum System Requirements 5
Pre-Installation Checklist 6
The Gateway's Rear Panel 6
The Gateway's Front Panel LED Description 7
Hardware Installation Setup 8

CHAPTER 2: GETTING STARTED

Setup Wizard 12
Time Zone Settings 13
Device IP Settings 13
ISP Settings 14
Connect to Cable ISP 15
Static IP Settings 15
PPPoE Settings 16
PPTP Settings 18
Telstra Settings 19
ISP Additional Settings 20
Modem Settings 22
VPN Settings 24
Main Mode 28
Aggressive Mode 29
Manual Mode 31
Save & Restart 32
Logout 33

CHAPTER3: DEVICE INFORMATIO

CHAPTER 4: DEVICE STATUS

DHCP Server Settings 41
Virtual Server Settings 42
Routing Settings 45
Filter Settings 47
Filter Settings: LAN Filter Settings 48
Filter Settings: WAN Filter Settings 50
Administration Settings 52

Dynamic DNS Settings 55
URL Filter Settings 56
E-Mail ALERT 57
Save & Restart 59

CHAPTER 6: SYSTEM TOOLS

System Tools: Intruder Detection Log 61
System Tools: Display Routing Table 62
System Tools: System Diagnostics 62
System Tools: Save Settings 63
System Tools: Load Settings 64
Upgrade Firmware: Load Default Settings 64
Upgrade Firmware: Load Settings From File 65
System Tools: Upgrade Firmware 65
System Tools: Reset Device 66

CHAPTER 7: HELP

APPENDIX

Configuring Your PC to “Obtain an IP automatically” 67
Viewing Your PC’s Network Information 68
Virtual Private Network (VPN) Examples 70

Chapter 1: Introduction

This manual contains detail instructions, on how to setup and operate the VPN Internet Gateway.

The VPN Internet Gateway provides an easy and cost effective way to communicate securely over a public network, such as the Internet. You can configure the VPN Internet Gateway to automatically encrypt all data transmitted to a particular site or sites over the Internet. The VPN Internet Gateway can create a secure connection between two or more sites.

The VPN Internet Gateway is equipped with:

- A WAN Ethernet port (connects to any Cable/xDSL modem)
- 4 LAN Ethernet ports (connect to a PC client or a Hub/switch etc.)
- One asynchronous port (connects to a dial up modem or an ISDN TA)

Connect any Cable/xDSL modem to the VPN Internet Gateway, to establish a high speed Internet connection. Once an Internet connection is made, you can start establishing VPN connections. Those who require a private and secure connection will find this device an easy and cost effective solution to a lease line connection.

The asynchronous port can be connected to a dial-up modem or to an ISDN TA and provides you with a backup Internet connection should the Cable/xDSL connection fail. If there is no Cable/xDSL service in your area, the asynchronous port can also serve as your Internet access connection.

The VPN Internet Gateway provides a total solution for those SOHO (Small Office and Home Office), SMB (Small and Medium size Businesses) and ROBO (Remote Office and Branch Office) users, who require a VPN and other sophisticated functions at a cost effective price.

Features

- Supports Virtual Private Network (VPN) connections (IPSec)
- Supports up to 32 IPSec tunnel connections
- Supports VPN client software (Safenet and SSH)
- Supports DES/3DES/AES128,192,256 Encryption, IP Encapsulating Security Payload (ESP), Authentication (MD5/SHA-1)
- Shared Internet connection via any Cable or xDSL modem

- Asynchronous port for backup or dial-up Internet connection
- Supports up to 253 users
- Provides solid firewall protection for LAN clients/computers
- Built-in high speed 4 port 10/100, auto -detection switch to connect to computers or to additional switches/hubs
- Ethernet WAN port (10/100 Base-T), automatically detects the cable type
- Provides centralization of all network address settings (DHCP)
- Comprehensive device monitoring system: Device status, Device information, System Tools, Intruder Detection log and more.
- Easy-to-use, Web-based setup and configuration
- Dynamic DNS to have Web and other Servers behind a Dynamic IP address
- Acts as a Virtual server to enable remote access to Web, FTP, and other services on your network
- Support Multiple WAN IP address
- Port Range Mapping and Port Redirection
- DMZ for full 2-way communication between your LAN and the Internet
- URL filtering function
- Supports the UPnP protocol
- E-Mail alert when a network security breach occurs

Package Contents

Please inspect your package. The following items should be included:

1. VPN Internet Gateway (the Device)
2. Power adapter
3. User's Guide

If any of the above items are damaged or missing, please contact your dealer immediately.

Minimum System Requirements

- Microsoft Internet Explorer 4.0 (or later version) or Netscape Navigator 4.0 (or later version)
- One computer with an installed 10Mbps, 100Mbps or 10/100Mbps Ethernet card

- One external xDSL or Cable modem with an Ethernet port (RJ-45)
- One Modem or ISDN TA (if a dialup connection is needed)
- One RJ-45 Cable/xDSL Internet connection
- TCP/IP protocol installed in your computer
- UTP network Cable with a RJ-45 connector

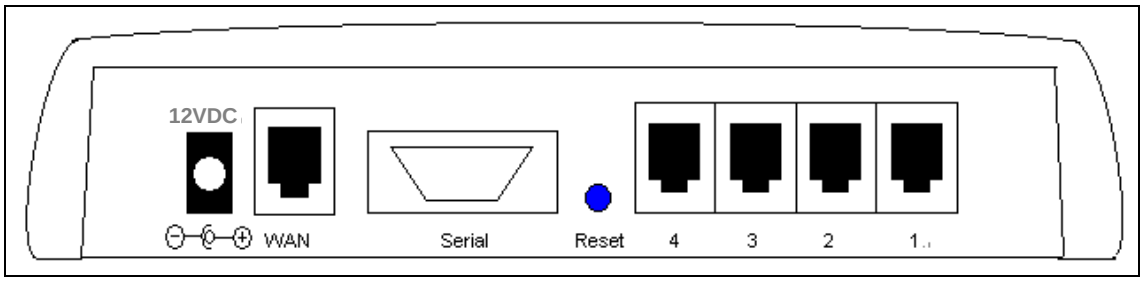
Pre-Installation Checklist

Before installing the VPN Internet Gateway, you should:

- Have carefully read the entire manual.
- Be familiar with the terminology and concepts of browsers. (This guide works under the assumption that you are proficient with the browsers you are using).
- Have met all the hardware and software requirements.

The Gateway's Rear Panel

The diagram below shows the VPN Internet Gateway's rear panel and is where all the hardware connections are made.



Rear View Ports	Description
Power (12VDC)	The power port is where you plug the DC power adapter
WAN	The WAN 100M Ethernet port (supports auto crossover) is where you connect your xDSL/Cable modem.
Serial	The Serial port is where you connect the 56K modem / ISDN TA

Reset	If you want the device to have the factory default settings, press the reset button and hold it for **5 ~ 6 seconds** This will load the factory default settings into the device. **Please be careful Do not press the reset button unless you want to clear the current configurations**
Ports 1-4	There are four LAN ports on the rear panel (supports auto crossover). This is where you connect network devices, such as PCs, switches, hubs, print servers, LAN servers or other network devices to the VPN Internet gateway.

The Gateway's Front Panel LED Description

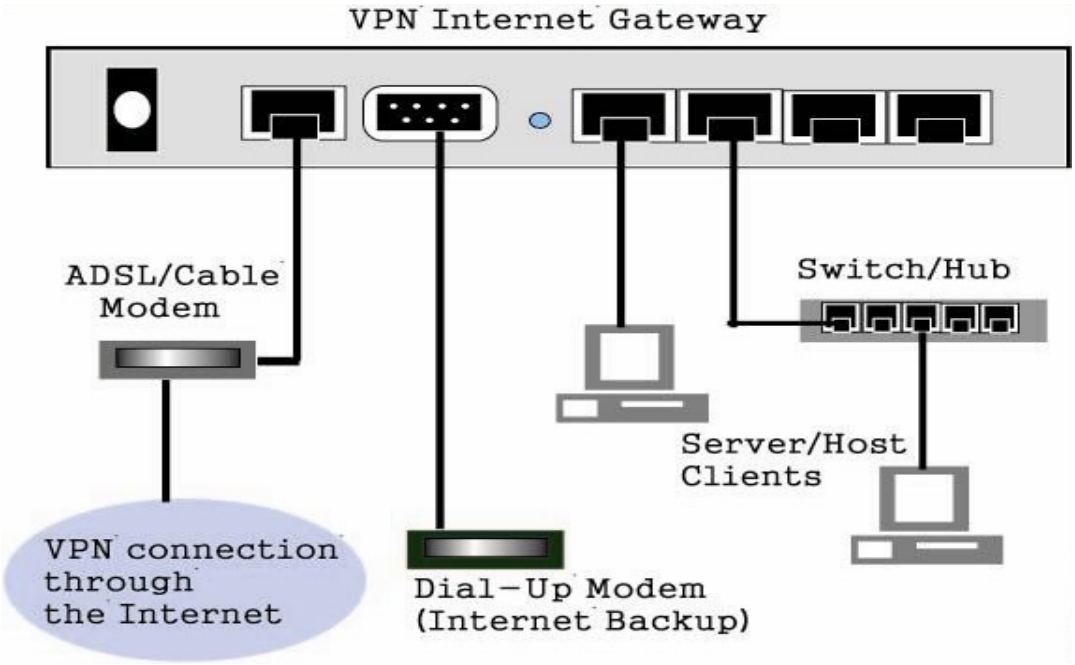
On the router's front panel there are LED lights that inform you of the router's current status. Below is an explanation of each LED and its function.

LED	LED Status	Description
LAN (1-4) Link/Act	Off	Green LED will NOT Light if there is no connection
	Green	Green LED will LIGHT when a connection has been established.
	Blinking Green	Green LED will BLINK if packets are been transmitted or received
Serial	Off	Green LED will NOT Light if there is no connection

LED	LED Status	Description
	Green	Green LED will LIGHT when a link has been established.
WAN	Off	Green LED will NOT Light when a link has not been established.
	Green	Green LED will LIGHT when a link has been established.
STATUS	Blinking Orange	Orange LED will BLINK when the device is booting up or upgrading a firmware.
POWER	Off	NO Power
	RED	Red LED will LIGHT if the Gateway is receiving power.

Hardware Installation Setup

The diagram below shows how the VPN Internet Gateway is typically setup.



When you setup the hardware installation please note the following.

1. Make sure that the power supply outlet voltage is compatible with the power adapters of your PCs, Cable/xDSL modem and the VPN Internet Gateway.

2. For the VPN Internet Gateway, only use the power adapter that comes with it.

3. Connect a network cable from your PC’s Ethernet port to one of the LAN ports at the rear panel of the VPN Internet Gateway. Do the same with all of the PCs or switches/hubs you wish to connect to the VPN Internet Gateway.

4. Connect the network cable from your Cable/xDSL modem to the WAN Ethernet port at the rear panel of the VPN Internet Gateway.

Chapter 2: Getting Started

To setup the VPN Internet Gateway and get connected to the Internet, follow the following step-by-step procedure:

1. Setup your hardware network installation (see Chapter 1 – Hardware Installation setup)

2. Configure your network computers (LAN server/client/host) to "Obtain an IP address automatically." (See Appendix)

> **Note:** By default, the VPN Internet Gateway's DHCP is enabled - so by setting your computer to "Obtain and IP address automatically" - you can connect to the Gateway automatically.

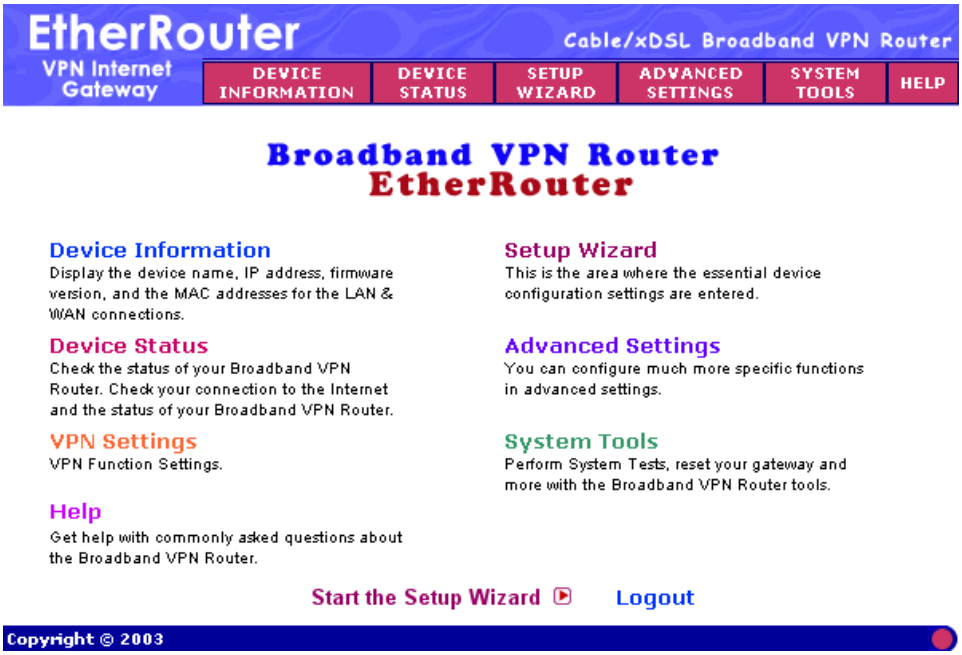
3. Launch your web browser and type the router's default IP address **(http:// 192.168.2.1)** into the browser's address box and press **Enter.**

ADSL Cable/xDSL Internet Router - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://192.168.2.1/
Go

> **Note: If you have setup your computer to use a static IP addr ess, p**lease make sure your PC's IP address is in the same network as the router's. In windows 95/98 y ou can type **WINIPCFG** and in windows 2000/NT you can type **IPCONFIG** (see appendix) to find out if you are on the same network.

4. A username and password will appear. Leave the password box empty and type **admin** (the default username) in the username box. Click OK.

5. The main menu will appear. It displays all the available functions and configurations for the VPN Internet Gateway.


EtherRouter
VPN Internet Gateway
Cable/xDSL Broadband VPN Router
DEVICE INFORMATION
DEVICE STATUS
SETUP WIZARD
ADVANCED SETTINGS
SYSTEM TOOLS
HELP
Broadband VPN Router
EtherRouter
Device Information
Display the device name, IP address, firmware version, and the MAC addresses for the LAN & WAN connections.
Device Status
Check the status of your Broadband VPN Router. Check your connection to the Internet and the status of your Broadband VPN Router.
VPN Settings
VPN Function Settings.
Help
Get help with commonly asked questions about the Broadband VPN Router.
Setup Wizard
This is the area where the essential device configuration settings are entered.
Advanced Settings
You can configure much more specific functions in advanced settings.
System Tools
Perform System Tests, reset your gateway and more with the Broadband VPN Router tools.
Start the Setup Wizard
Logout
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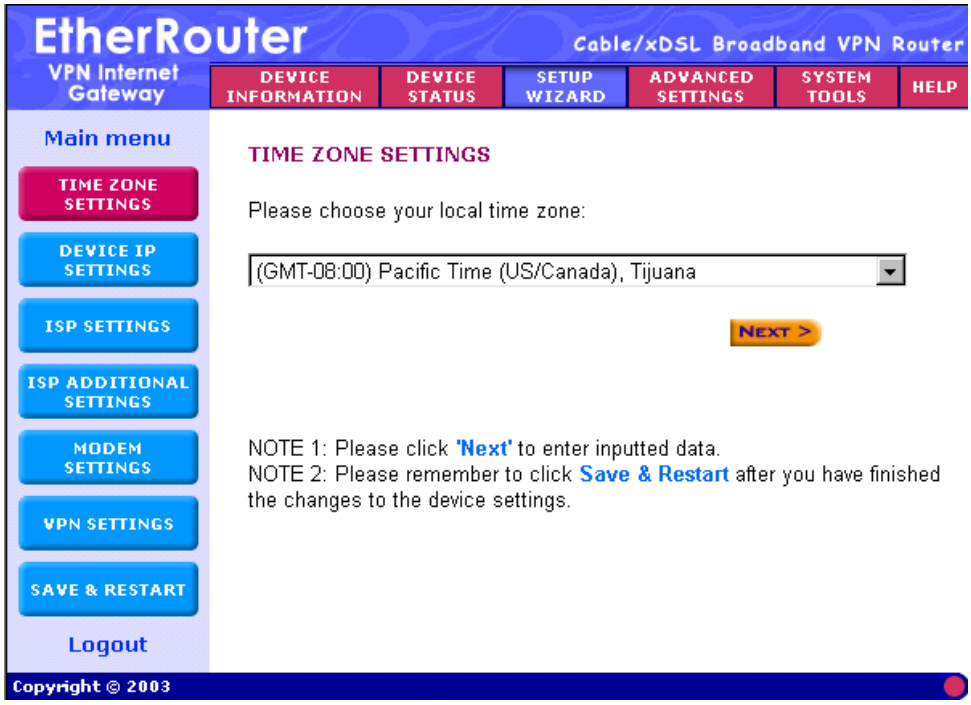
The User Interface is extremely user-friendly and is divided into 6 main sections. These sections are listed on the top Tool bar (see screen above) and appear at the top of every browser screen for easy access. For your reference, the 6 sections are as follow:

Main Menu	Description
Device Information (chapter 3)	The **Device Information** section displays the VPN Internet Gateway's network and firmware information.
Device Status (chapter 4)	**Device Status** displays the current connection status of the VPN Internet Gateway.
Setup Wizard (chapter 2)	This is the most important section out of the 6 sections. You must configure this section to begin using the VPN Internet Gateway. The **Setup Wizard** is where you input the information required to connect the VPN Internet Gateway to your Internet Service Provider (ISP).

Main Menu	Description
Advanced Settings (chapter 5)	The **Advanced Settings** section is where you can configure all the major features and functions of the VPN Internet Gateway. They include: DHCP Server Settings, Virtual Server Settings, Routing Settings, Filter Settings, Administration Settings, Dynamic DNS Settings, URL Filter Settings and E-Mail ALERT
System Tools (chapter 6)	The **System Tools** section monitors the status of the VPN Internet Gateway, such as Intruder Detection Log, Display Routing Table, System Diagnostics, Save Settings, Load Settings, Upgrade Firmware and Restart Device
Help (chapter 7)	A help section for the VPN Internet Gateway

6. Click the SETUP WIZARD. The setup wizard's page will appear as shown below.



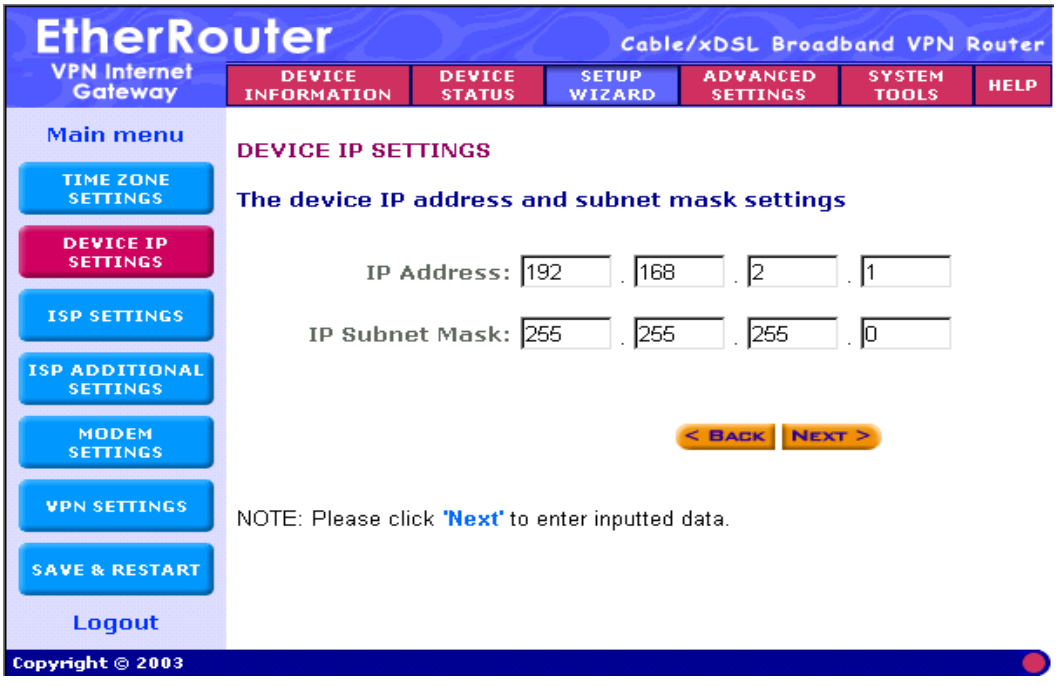
The Setup wizard will take you through 7 step-by-step (7 steps: buttons on the left) configuration procedures that you'll need to do in order to setup the VPN Internet Gateway (e.g. connecting to the Internet / establishing a VPN connection).

You can click on one of the 7 buttons on the left to jump to that specific setting. Otherwise by clicking **Next**, you will proceed to the next step sequentially. (We recommend that you follow the 7 steps sequentially). The 7 steps are as follows:

- (Step A) **Time Zone Settings**
- (Step B) **Device IP Settings**
- (Step C) **ISP Settings**
- (Step D) **ISP Additional Settings**
- (Step E) **Modem Settings**
- (Step F) **VPN Settings**
- (Step G) **Save & Restart**

7. **(Step A) Time Zone Settings**Please choose a local time zone. Once you have selected a time zone, click the **Next** button to continue to the next step.

8. **(Step B) Device IP Settings**
   In this section, you have to give your VPN Internet Gateway an IP address for the local area network (LAN) side. This is not the IP address given to you by your ISP, but rather the local internal LAN (Private) IP address of your network. The IP address "192.168.2.1" is the default value of your VPN Internet Gateway.



The screen shown above is described in the following table:

Parameters	Description
Device IP Address Settings	
IP Address	Assign an internal LAN IP address for this VPN Internet Gateway or leave it as the default value “192.168.2.1.”
IP Subnet Mask	Enter the subnet mask, you can usually leave it as the default entry “255.255.255.0”

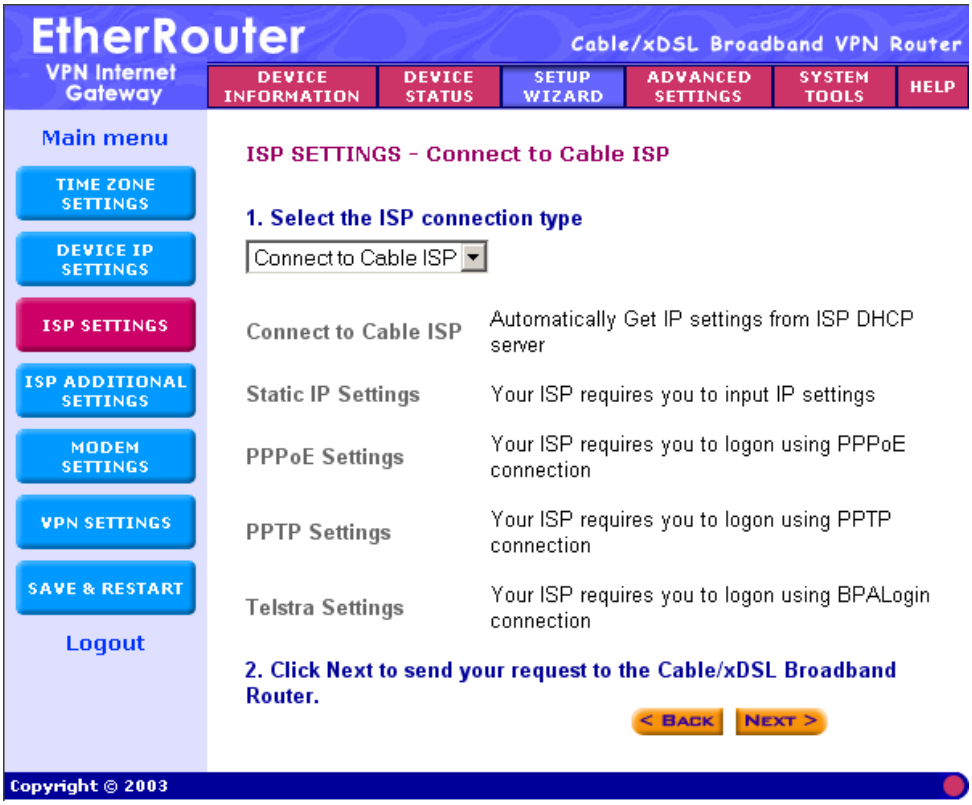
Once you have filled in the above information, click the **Next** button to continue to the next step.

9. **(Step C) ISP Settings**

Different ISPs require different methods of connecting to the Internet. The ISP Settings section is where you input all the information required by your ISP, so that you can connect to the Internet. There are 5 different types of ISP connections in the ISP Settings section. Select the connection required by your ISP from the **Select the ISP connection type** drop down menu and then proceed to that connection type step. The 5 ISP connection types are as follow:

ISP Connection Type	Description
Connect to Cable ISP (Step 8-1)	Your ISP will automatically give you an IP address
Static IP Settings (Step 8-2)	Your ISP has given you an IP address already
PPPoE Settings (Step 8-3)	Your ISP requires you to use a Point-to-Point Protocol over Ethernet (PPPoE) connection.
PPTP Settings (Step 8-4)	Your ISP requires you to use a Point-to-Point Tunneling Protocol (PPTP) connection.

ISP Connection Type	Description
Telstra Settings (Step 8-5)	The Telstra Settings is a service that applies to connections in Australia only.



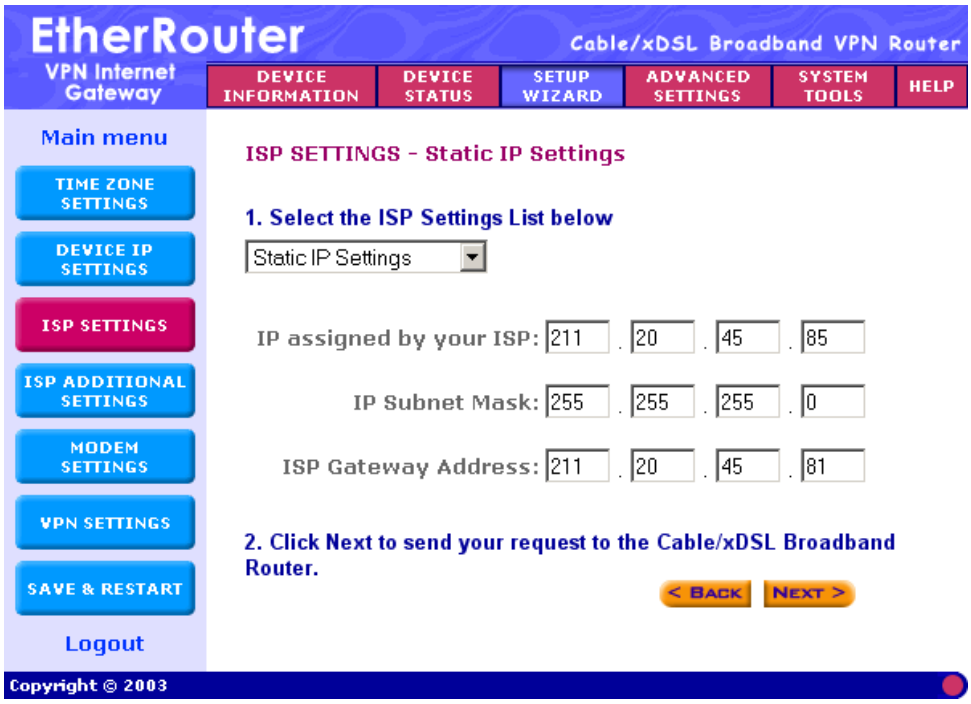
Step 8-1) **Connect to Cable ISP:** Select **Connect to Cable ISP** if you have a cable connection. Please select "**Connect to Cable ISP**" and click "**Next**" to proceed to the next page. Proceed to step 9 (Step D) **ISP Additional Settings** of this manual

Step 8-2) **Static IP Settings** Select Static IP Settings, if your ISP has given you a static IP address. You will have to enter the following information:

Parameter	Description
IP assigned by your ISP	Enter the IP address (provided by your ISP)
IP Subnet Mask	Enter the IP subnet mask (provided by your ISP)

Parameter	Description
ISP Gateway Address	Enter the ISP gateway address (provided by your ISP)

Note: Once you have filled in the above information, click "**Next**" to proceed to the next step. Proceed to step 9 (Step D) **ISP Additional Settings** of this manual


EtherRouter
VPN Internet Gateway
Cable/xDSL Broadband VPN Router
DEVICE INFORMATION
DEVICE STATUS
SETUP WIZARD
ADVANCED SETTINGS
SYSTEM TOOLS
HELP
Main menu
TIME ZONE SETTINGS
DEVICE IP SETTINGS
ISP SETTINGS
ISP ADDITIONAL SETTINGS
MODEM SETTINGS
VPN SETTINGS
SAVE & RESTART
Logout
ISP SETTINGS - Static IP Settings
1. Select the ISP Settings List below
Static IP Settings
IP assigned by your ISP: 211 . 20 . 45 . 85
IP Subnet Mask: 255 . 255 . 255 . 0
ISP Gateway Address: 211 . 20 . 45 . 81
2. Click Next to send your request to the Cable/xDSL Broadband Router.
< BACK
NEXT >
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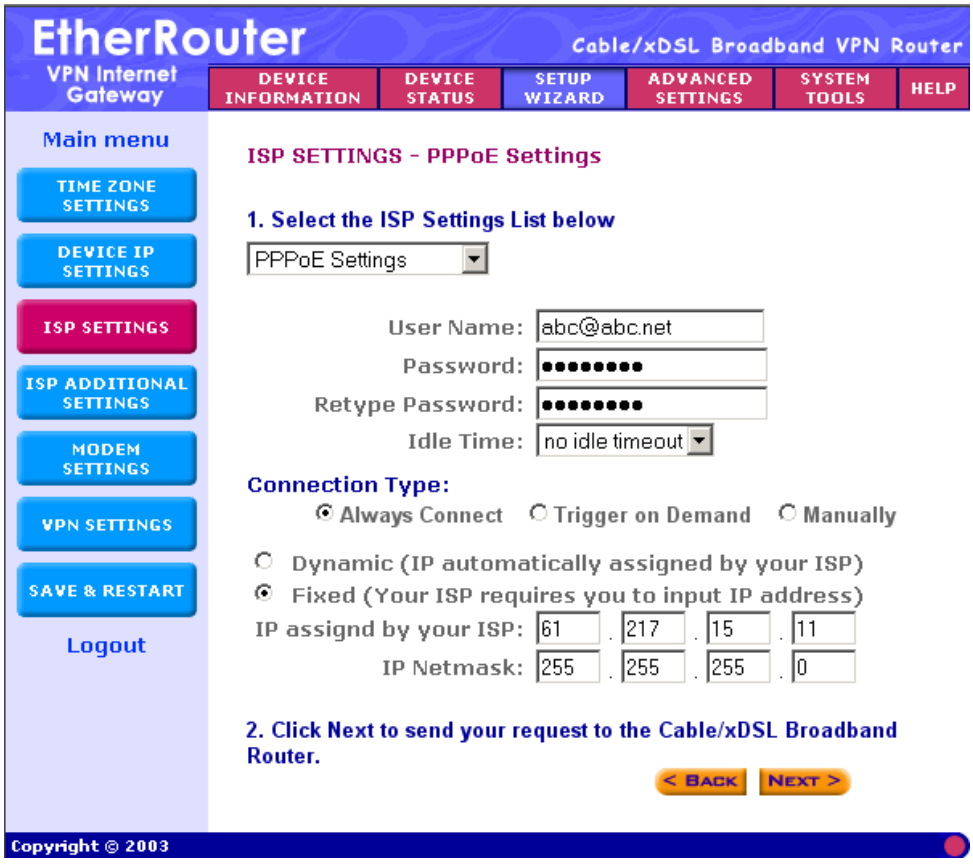
Step 8-3) **PPPoE Settings** Select PPPoE Settings if your ISP requires the PPPoE protocol to establish an Internet connection. You will have to enter the following information:

Parameter	Description
User name	Enter the user name of your ISP account.
Password	Enter the password of your ISP account.
Retype password	Enter the password of your ISP account again to re-confirm.
Connection Type	Select **ONE** of the following. **Always Connect** The VPN Internet Gateway will always connect with your ISP. If this is the case, the **Idle Time** function is unavailable.

Parameter	Description
Trigger on Demand	– Once the VPN Internet Gateway detects any out-going packets, the VPN Internet Gateway will connect with your ISP automatically. **Manual** – You can manually disconnect/connect with your ISP for the WAN port (Cable/xDSL). If this is the case, you have to go to the **DEVICE STATUS** page and click **Connect** button to establish the connection or click **Disconnect** button to disconnect the connection.
Dynamic/Fixed	Select **ONE** of the following. **Dynamic** - If your ISP will automatically assign you an IP address **Fixed** - If your ISP has given you a fixed IP address already, then enter that IP address in the *IP assigned by your ISP* box. Also enter the subnet mask (provided by ISP) in the *IP Netmask* box

Note: Once you have filled in the above information, click "**Next**" to proceed to the next step. Proceed to step 9 (Step D) **ISP Additional Settings** of this manual

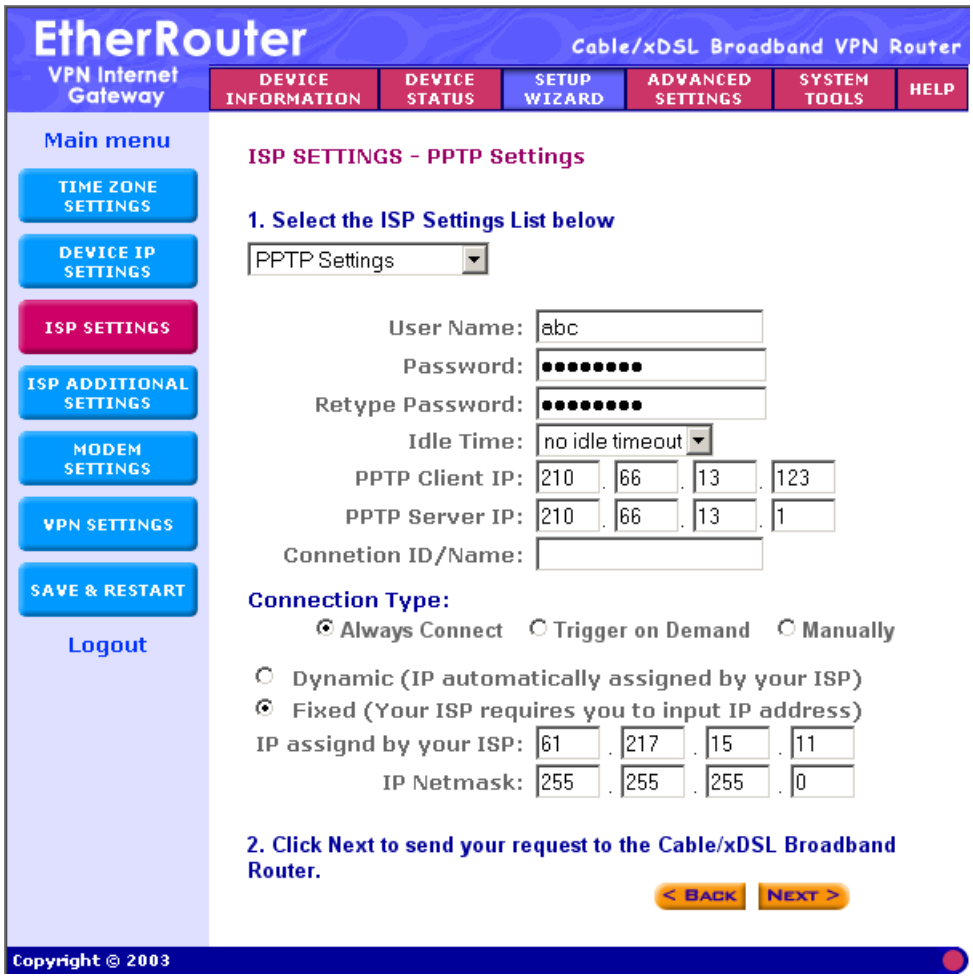


Step 8-4) **PPTP Settings** Select PPTP Settings, if your ISP requires the PPTP protocol to establish an Internet connection (e.g. Europe). You will have to enter the following information:

Parameter	Description
User name	Enter the user name of your ISP account.
Password	Enter the password of your ISP account.
Idle Time	Optional: You do not have to configure this section. It depends on the user's need s. If the Internet connection has been idle for a certain period of time (the Idle Time selected), the Idle Time function will automatically disconnect the Internet connection.
PPTP Client IP	Enter the PPTP client IP address (Provided by your ISP)
Connection ID	Input this ID information only if your ISP has given you one.
Connection Type	Select **ONE** of the following. **Always Connect**- The VPN Internet Gateway will always connect with your ISP. If this is the case, the **Idle Time**function is unavailable. **Trigger on Demand**– Once the VPN Internet Gateway detects any packets want to get to Internet, the VPN Internet Gateway will connect with your ISP automatically. **Manual** – You can manually disconnect/connect with your ISP for the WAN port (Cable/xDSL). If this is the case, you have to go to the **DEVICE STATUS** page and click **Connect** button to establish the connection or click the **Disconnect** button to disconnect the connection.
Dynamic/Fixed	Select **ONE**. **Dynamic** - If your ISP will automatically assign you an IP address

Fixed - If your ISP has given you a fixed IP address already, then enter that IP address in the *IP assigned by your ISP* box. Also enter the subnet mask (provided by ISP) in the *IP Netmask* box

Note: Once you have filled in the above information, click "**Next**" to proceed to the next step. Proceed to step 9 (Step D) **ISP Additional Settings** of this manual

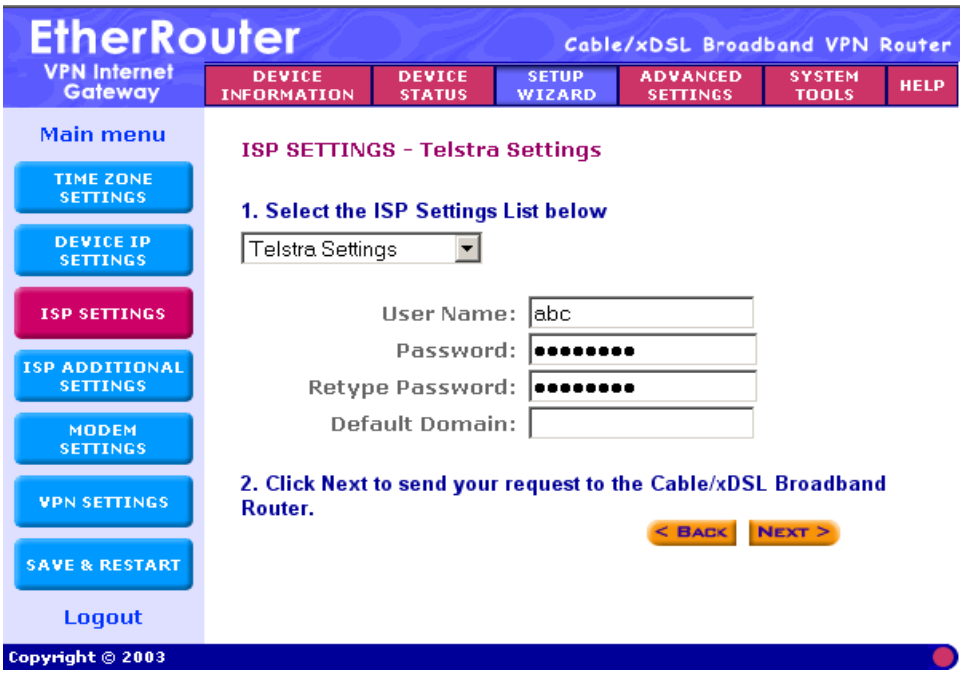


Step 8-5) Telstra Settings: The **TelstraSettings** is a service that applies to connections in Australia only. You will have to enter the following:

Parameter	Description
User Name	Enter the User Name (Provided by the ISP)
Password	Enter the Password (Provided by the ISP)

Parameter	Description
Retype password	Re-Enter the password of your ISP account again to re-confirm.
Default Domain	Input the default domain if your ISP has given you one

Note: Once you have filled in the above information, click "**Next**" to proceed to the next step. Proceed to step 9 (Step D) **ISP Additional Settings** of this manual



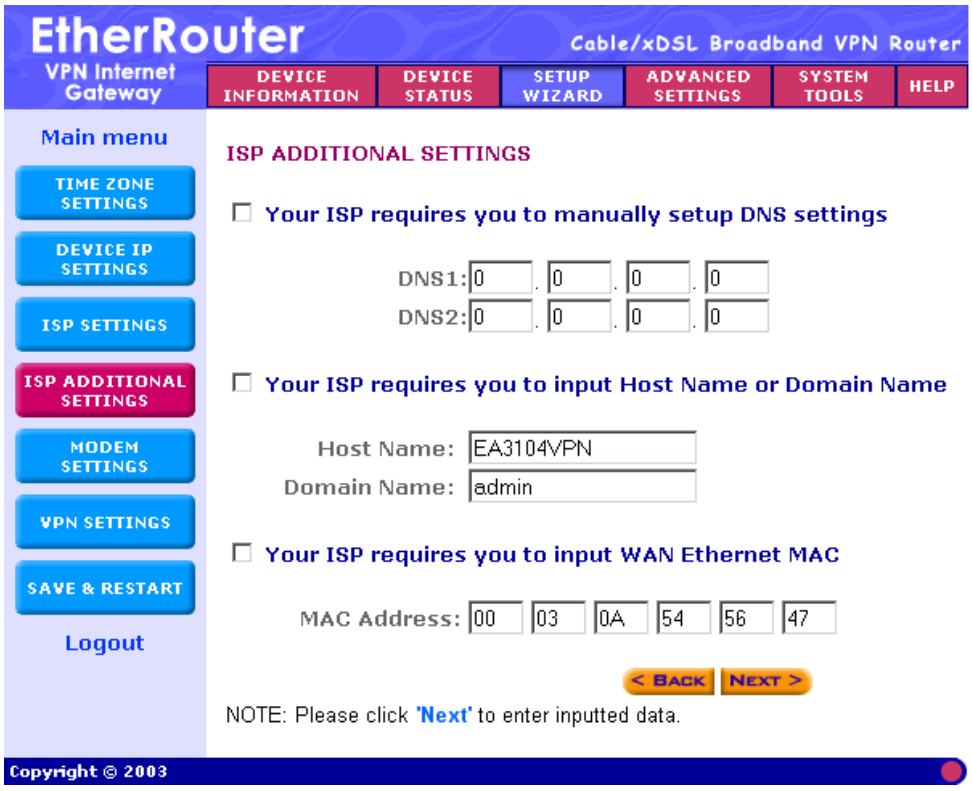
9 **(Step D) ISP Additional Settings**

In this section you can input special settings required by certain ISPs. You do not need to configure the entire section or any part of the section, only the settings needed by your particular ISP (if any). If your ISP does not require any additional settings, then please leave this section blank and proceed to the next step.

Parameter	Description
Your ISPs require you to manually setup the DNS settings	If your ISP requires you to input a DNS setting then you must check this box to enable this function and then enter the DNS address (see **DNS IP Address** below)

Parameter	Description
DNS IP Address	Enter the DNS IP address (provided by ISP)
Some ISPs use Host Name and Domain Name to authenticate the user	If your ISP requires you to fill in a Host Name and Domain Name then you must check this box to enable this function and then enter the Host Name and Domain Name (see **Host/Domain Name** below)
Host Name	Enter the Host Name (provided by your ISP)
Domain Name	Enter the domain name (provided by your ISP)
Your ISPs require you to input the LAN card's Mac address	If your ISP requires a specific MAC address in order for you to connect to the Internet, then check the box to enable this function and then enter the Mac address (see **MAC Address** below) **NOTE:** Some ISPs may only recognize your PC's LAN card MAC address as a legal user. In this case, you will have to copy the LAN card MAC address of that PC and input it in the MAC address field. For WIN 95/98 you can run **winipcfg** to see the LAN card Mac address For WIN 2000/NT you can run **ipconfig/all** to see the LAN card Mac address
MAC Address	Enter the PC's LAN card MAC address that your ISP recognizes as the legal user

Note: Once you have filled in the above information, click "**Next**" to proceed to the next step.



10. **(Step E) Modem Settings**

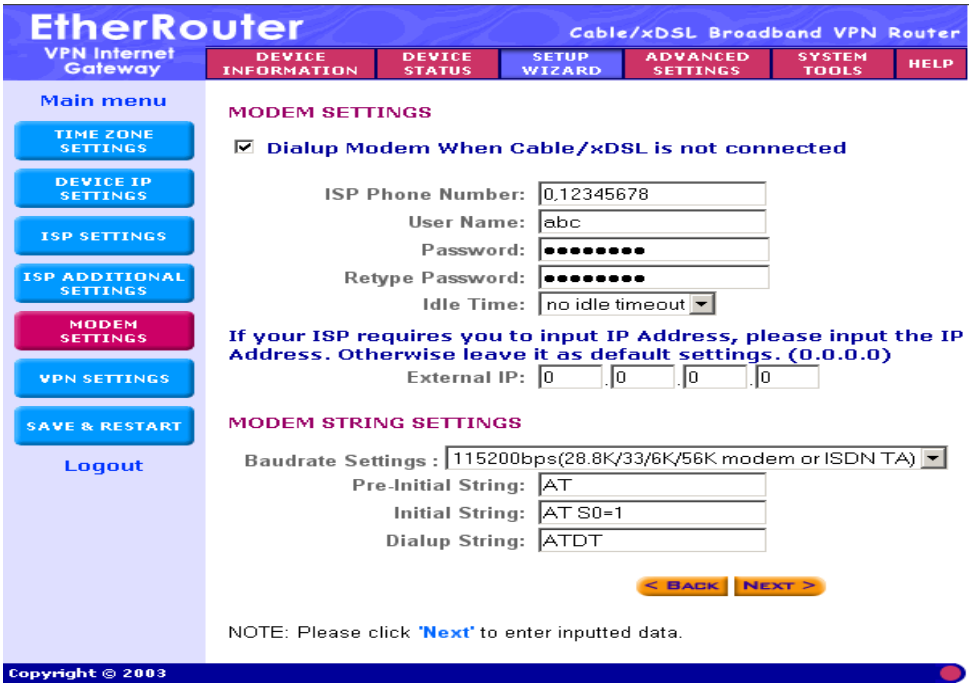
The modem settings screen is where you can setup the asynchronous port as either a backup connection for the Cable/xDSL connection or a dialup Internet access connection.

Note: This section is **Optional** You may proceed to **Step F** if you do not wish to use the asynchronous port.

Parameter	Description
Dialup Modem When Cable/xDSLis not Connected	Click on this box to enable the asynchronous port
ISP Phone Number	Enter the ISP phone number (Dial-Up)
User Name	Enter the User Name for the dial-up
Password	Enter the Password for the dial-up
Retype Password	Enter the Password again to re-confirm

Parameter	Description
Idle Time	You can select an idle time threshold (minutes) for the WAN port. This means if no packets have been sent (no one using the Internet) throughout this specified period, then the router will automatically disconnect with your ISP.
External IP	**(Optional)** If your ISP requires you to input an IP address then please input the IP address here. Otherwise leave it as the default setting (0.0.0.0).
Modem String settings	**(Optional)**Some modems require specific communication strings. This section allows you to specify strings on the router, so that it can communicate with your modem (if required). If you would like to change the baudrate speed, you can do so in the **Baudrate Settings** field. (Please refer to your modem's or ISDN TA's manual for more information)

Note: Once you have filled in the above information, click "**Next**" to proceed to the next step.



11. **(Step F) VPN Settings**

The VPN Settings section is where you can enable and configure the VPN function. Specifically, this device supports the widely used IPSec protocol standard for its VPN connection. VPN allows a secure connection between two parties over a public network, such as the Internet.

Note: This section is **Optional** You may proceed to **Step G** if you do not wish to establish a VPN connection.

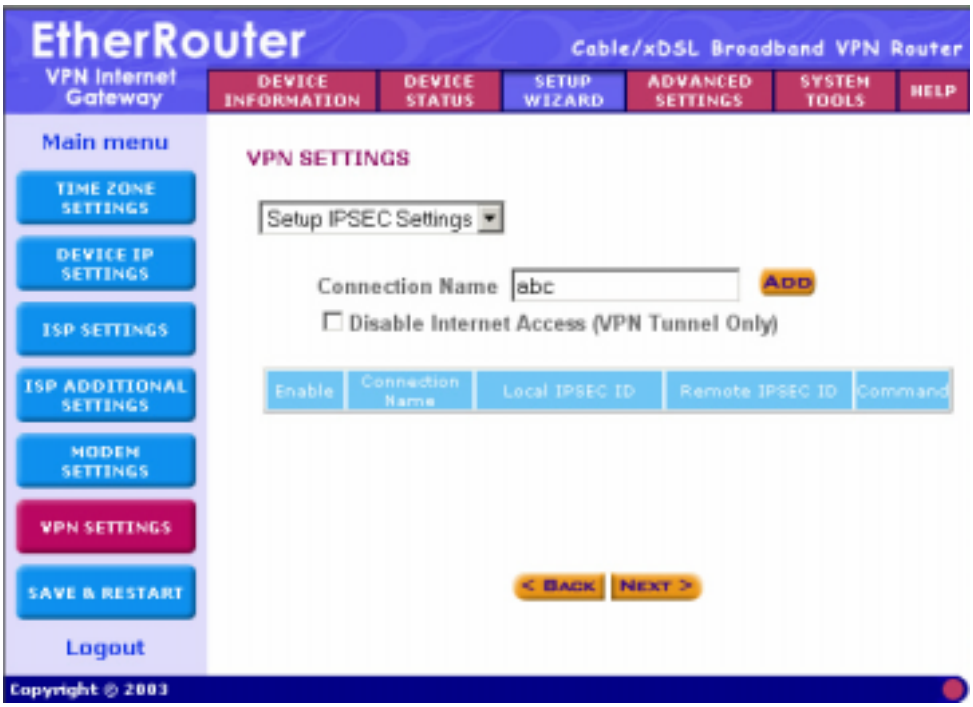
The VPN settings has 3 steps:

11-1) Select **Setup IPSEC Settings** Input a Connection Name to add/establish a VPN connection

11-2) Configure the VPN Connection

11-3) Secure Association

11-1) **Add a VPN connection: Connection Name**



Parameter	Description
ConnectionName	To add a VPN connection: Enter a string (name) into the **ConnectionName** box, and then click the **"ADD"** button.

Note: Once you have entered the connection name - click on the "**ADD**" button to start configuring this VPN connection. The screen below will appear and this is where the VPN configuration is entered.

11-2) **Configure the VPN Connection**

Parameter	Description
Connection Name	This is the Connection Name you entered in the previous screen (Connection Name)
Enable UID	**Optional -** This will enable the Unique Identifier string (UID). **Disable UID** will disable the UID. The VPN Internet Gateways use the UID for authentication purposes. (see **Local/Remote IPSEC Identifier** below)

Parameter	Description
Local IPSECIdentifier	**Optional**- This field allows you to identify multiple tunnels; if you enable the UID function, then you must set the **Local IPSec** Identifier so that it matches the remote side's Remote IPSec Identifier. You can enter a proper name in this field.
Remote IPSEC Identifier	**Optional**- This field allows you to identify multiple tunnels; if you enable the UID function, then you must set the **Remote IPSec** Identifier so that it matches the remote side's Local IPSec Identifier. You can enter a proper name in this field.
Enabled Keep Alive	**Optional**- If this function is enabled, it will keep this VPN connection alive (connected)
Enabled NetBIOS Broadcast	**Optional**- This function allows NetBIOS broadcast to be transmitted in this VPN connection
Remote Site	Select **One** of the following: **Single User** – Select **Single User** if the remote VPN site is a VPN client, e.g. remote site has no VPN Internet Gateway. **The remote VPN client must have a VPN client software installed (e.g. Safenet, SSH, etc.).** **LAN** **–** Select **LAN** if the remote VPN site has a VPN Internet Gateway.
Remote IP Network	This is the remote site's NETWORK IP address. (**Single User** – Input the actual IP address of the Remote VPN client. **LAN** – Input the network IP of the remote gateway's internal (private) network)

Parameter	Description
Remote IP Netmask	This is the remote site's subnet mask
Remote Gateway IP/FQDN	Input the remote site's **Gateway IP** address (for **Remote Site – LAN** only) or the Fully Qualified Domain Name (**FQDN**). FQDN consists of a host and domain name, including top-level domain. For example, **WWW.VPN.COM** is a fully qualified domain name. **WWW** is the host, **VPN** is the second-level domain, and **COM** is the top-level domain. When you enter the FQDN of the remote site, the VPN gateway will automatically seek the IP address of that FQDN. **Note:** In **IKE Mode**, if the Remote Gateway IP has a dynamic IP address, you must enter "0.0.0.0" in the **Remote Gateway IP/FQDN** field. In **Manual Mode**, you must fill in the **Remote IP**, **Remote IP Network** and **Remote Gateway IP/FQDN** field (**Remote Gateway IP/FQDN** field cannot be 0.0.0.0 for the manual mode). See Appendix - VPN example.
Network Interface	Select an interface type for the this VPN connection

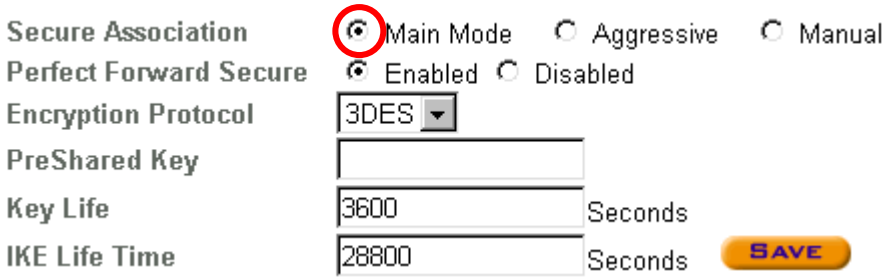
11-3) **Secure Association**

Secure Association is a method of establishing a security policy between two points.

There are three methods of creating a **Secure Association** (SA),
Method 1: Main mode (By default **Main mode** is selected),
Method 2: Aggressive mode
Method 3: Manual mode.

11-3) **Method 1: Main Mode:**

Main mode is an *automated* method of establishing a shared security policy and authenticated keys. A preshared key is used for mutual identification (IKE).



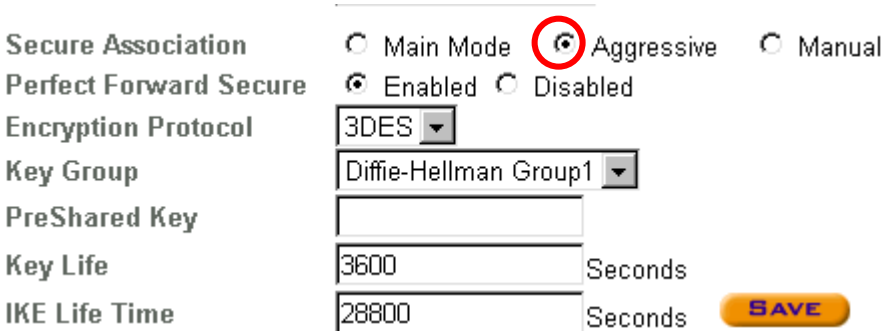
Parameter	Description
PerfectForwardSecure	Click either the Enabled or Disabled radio button. This feature provides a better security; it ensures that the encryption keys generated are not relevant to each other.
Encryption Protocol	The VPN Internet Gateway supports five types of encryption algorithms **(DES, AES 128/192/256** and **3DES)**. Select an appropriate encryption algorithm. The encryption algorithm must match the encryption algorithm in the remote device.
PreShared Key	Enter the PreShared Key name (you can enter an alphanumeric name). This value must match the preshared key value in the remote device.
Key Life	Security is enhanced if the key used to encrypt/decrypt your data is changed periodically. The key life is where you can specify how often you wish the VPN Internet Gateway to renegotiate another key. The value is in seconds, for example, 3600 seconds = 1 hour.

Parameter	Description
IKE Life Time	The IKE Life Time field allows you to specify a period of time (seconds) that you want the VPN Internet Gateway to renegotiate the IKE security association. For example, 28800 seconds = 8 hours.

Note: In **IKE Mode**, if the Remote Gateway IP is dynamic, you should enter "0.0.0.0" See Appendix - VPN example.

11-3) **Method 2: Aggressive mode**

Aggressive is an *automated* method of establishing a shared security policy and authenticated keys. A preshared key is used for mutual identification.



Parameter	Description
PerfectForwardSecure	Click either the Enabled or Disabled radio button. This feature provides a better security; it ensures that the encryption keys generated are not relevant to each other.
Encryption Protocol	The VPN Internet Gateway supports five types of encryption algorithms **(DES,AES 128/192/256** and **3DES)**. Select an appropriate encryption algorithm. The encryption algorithm must match the encryption algorithm in the remote device.

Key Group

Diffie-Hellman key agreement describes a method whereby two parties, without any prior arrangements, can agree upon a secret key that is known only to them. The VPN Internet Gateway supports two versions of Diffie-Hellman (Group 1 and Group 2).

Diffie-Hellman Group 1 - IKE use the 768-bit Diffie-Hellman prime modulus group when performing the new Diffie-Hellman exchange.
Diffie-Hellman Group 2 - IKE use the 1,024-bit Diffie-Hellman prime modulus group when performing the new Diffie-Hellman exchange.

PreShared Key

Enter the PreShared Key name (you can enter a alphanumeric name). This value must match the preshared key value in the remote device.

Key Life

Security is enhanced if the key used to encrypt/decrypt your data is changed periodically. The key life is where you can specify how often you wish the VPN Internet Gateway to renegotiate another key. The value is in seconds, for example, 3600 seconds = 1 hour.

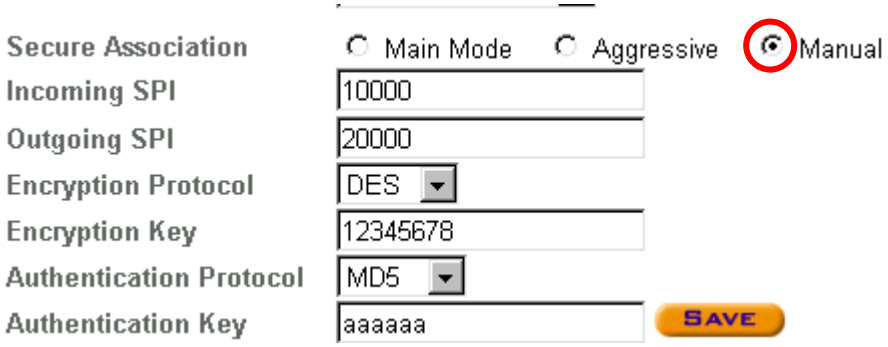
IKE Life Time

The IKE Life Time field allows you to specify a period of time (seconds) that you want the VPN Internet Gateway to renegotiate the IKE security association. For example, 28800 seconds = 8 hours.

Note: In **Aggressive Mode**, if the Remote Gateway IP is dynamic, you should enter "0.0.0.0" See Appendix - VPN example.

11-3) **Method 3: Manual mode**

This is a manual way of establishing a shared security policy and authenticated keys. The Manual mode allows you to pre-define keys. The Manual Mode settings in the remote device must match the configuration set here. To enable the Manual mode function, check the Manual radio box and input the fields as shown on the screen below.



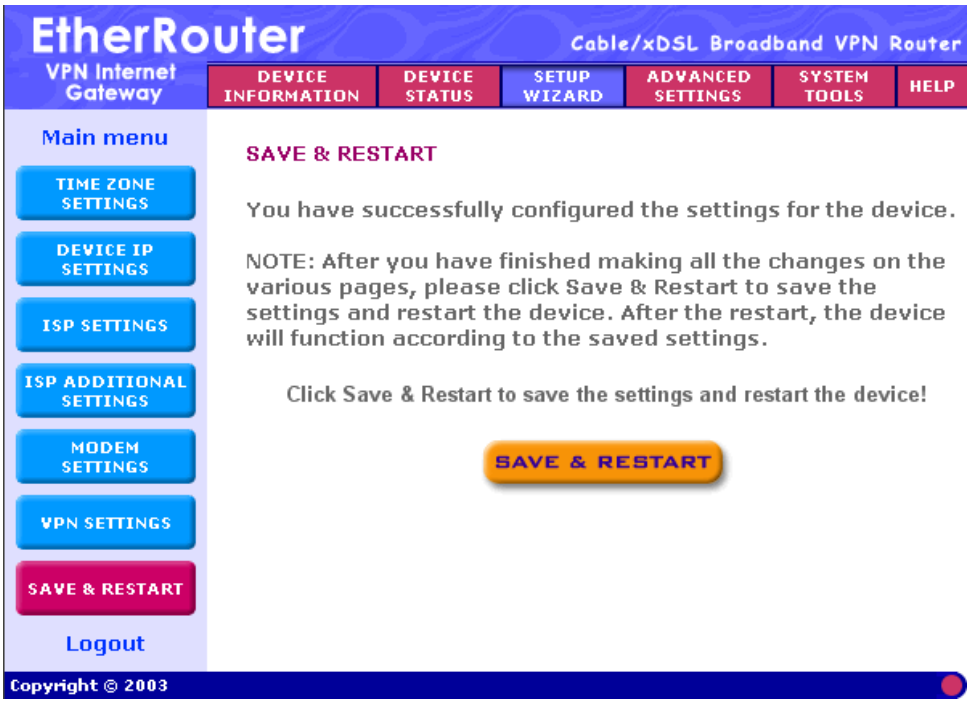
Parameter	Description
Incoming SPI	Enter the Incoming SPI that the remote VPN Gateway will use to identify this SA. The incoming SPI value must match the outgoing SPI at the remote site (other end of the VPN tunnel).
Outgoing SPI	Enter the Outgoing SPI that the local VPN Gateway will use to identify this SA. The outgoing SPI value must match the incoming SPI at the remote site (other end of the VPN tunnel).
Encryption Protocol	The VPN Internet Gateway supports six types of encryption algorithms **(Null**, **DES,AES 128/192/256** and **3DES)**. Select an appropriate encryption algorithm. The encryption algorithm must match the encryption algorithm in the remote device.
Encryption Key	This string is used as the key to encrypt and decrypt the data transmitted. This value must match the encryption key value in the remote device.

Parameter	Description
Authentication Protocol	The VPN Internet Gateway supports two authentication algorithms **(MD5** & **SHA-1)**. Select an appropriate authentication algorithm. The authentication algorithm selected here must be the same as the one in the remote device.
Authentication Key	This string is used as the key authentication. This value must match the authentication key value in the remote device.

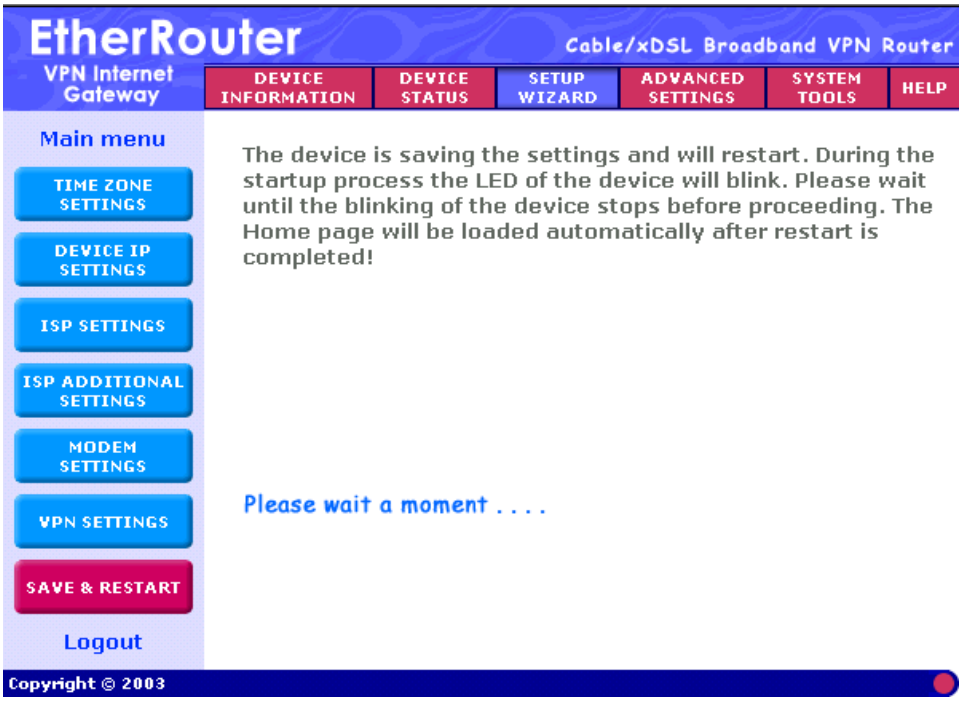
Note: In **Manual Mode**, you must fill in the **Remote IP**, **Remote IP Network** and **Remote Gateway IP/FQDN**(**Remote GatewayIP/FQDN** field cannot be 0.0.0.0.). See Appendix - VPN example.

12. **(Step G) Save & Restart**

This is the final step of the Setup Wizard's 7 step-by-step procedure. This step saves the settings you have made in the previous pages to the VPN Internet Gateway. Click **Save & Restart**to save the settings and to restart the device. After the device has restarted, the device will function according to the saved settings.


EtherRouter
VPN Internet Gateway
Cable/xDSL Broadband VPN Router
DEVICE INFORMATION
DEVICE STATUS
SETUP WIZARD
ADVANCED SETTINGS
SYSTEM TOOLS
HELP
Main menu
TIME ZONE SETTINGS
DEVICE IP SETTINGS
ISP SETTINGS
ISP ADDITIONAL SETTINGS
MODEM SETTINGS
VPN SETTINGS
SAVE & RESTART
Logout
SAVE & RESTART
You have successfully configured the settings for the device.
NOTE: After you have finished making all the changes on the various pages, please click Save & Restart to save the settings and restart the device. After the restart, the device will function according to the saved settings.
Click Save & Restart to save the settings and restart the device!
SAVE & RESTART
Copyright © 2003

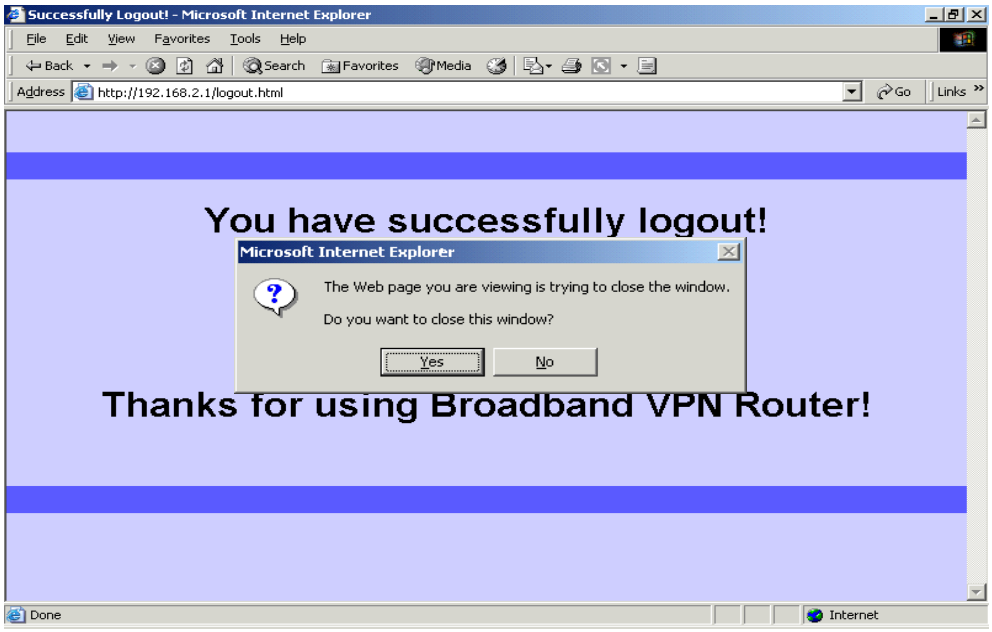
During the startup process the LED of the device will blink. Please **wait** until the LED lights have stopped blinking before proceeding.


EtherRouter
VPN Internet Gateway
Cable/xDSL Broadband VPN Router
DEVICE INFORMATION
DEVICE STATUS
SETUP WIZARD
ADVANCED SETTINGS
SYSTEM TOOLS
HELP
Main menu
TIME ZONE SETTINGS
DEVICE IP SETTINGS
ISP SETTINGS
ISP ADDITIONAL SETTINGS
MODEM SETTINGS
VPN SETTINGS
SAVE & RESTART
Logout
The device is saving the settings and will restart. During the startup process the LED of the device will blink. Please wait until the blinking of the device stops before proceeding. The Home page will be loaded automatically after restart is completed!
Please wait a moment . . . .
Copyright © 2003

Logout

Click **Logout** if you would like to exit (logout) the router's web based configuration page. Only one user can log onto the Gateway's web based configuration at a time. When you logout of the web-based configuration, only then can another computer log onto the device.

Click **Yes** - the screen will close.
Click **No** - the screen will not close.


Successfully Logout! - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://192.168.2.1/logout.html
Go Links
You have successfully logout!
Microsoft Internet Explorer
The Web page you are viewing is trying to close the window.
Do you want to close this window?
Yes
No
Thanks for using Broadband VPN Router!
Done
Internet

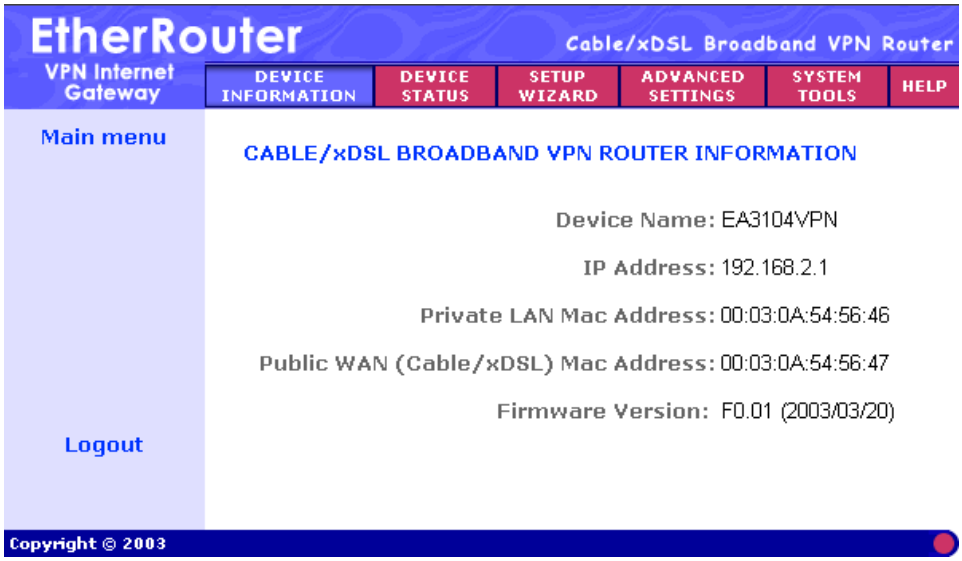
Congratulations! You have successfully configured the setup wizard. You may now use the VPN Internet Gateway to access the Internet.

If you would like to configure or monitor the many features that this Gateway has to offer, then proceed to the appropriate chapters for more details. Below is a list of the other Main Menus and their corresponding chapters:

- **Device Information (chapter 3)**
- **Device Status (chapter 4)**
- **Advanced Settings (chapter 5)**
- **System Tools (chapter 6)**
- **Help (chapter 7)**

Chapter 3: Device Information

The **Device information** section displays the VPN Internet Gateway's network and firmware information.



Parameters	Description
Device Name	Displays the name of the VPN Internet Gateway
IP Address	Displays the IP address of the VPN Internet Gateway
Private LAN MAC Address	Displays the MAC address of the VPN Internet Gateway's LAN port
Public WAN (Cable/XDSL) Mac Address	Displays the MAC Address of the Internet Gateway's WAN Ethernet port
Firmware version	Displays the VPN Internet Gateway's current Firmware Version and its release date

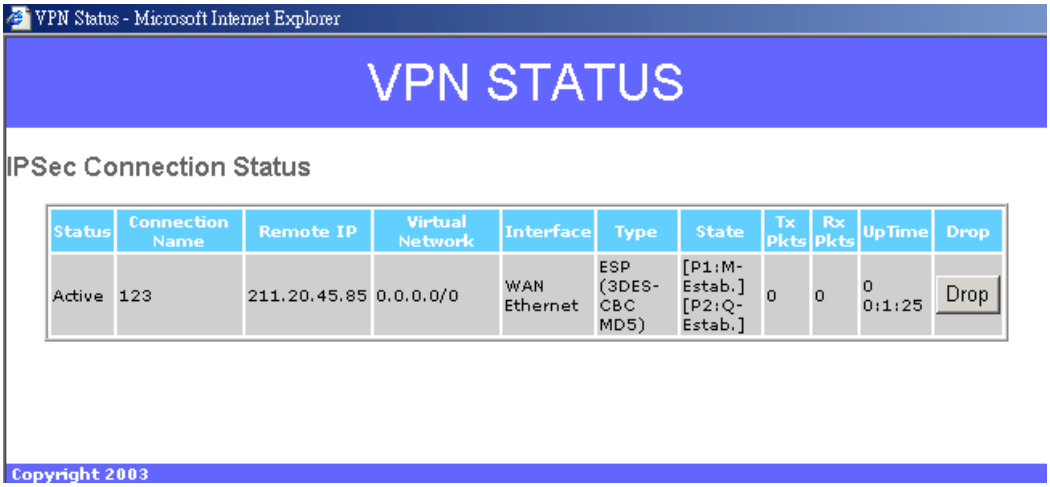
Chapter 4: Device Status

Device status displays the current connection status of the VPN Internet Gateway.

Parameter	Description
WAN Ethernet	Shows the Device's WAN information: **Cable/xDSL** (shows whether the Internet connection is active or inactive), **Connected by DHCP** (shows the WAN connection type e.g., DHCP, Static, PPPoE, PPTP or Telstra), ISP's **Gateway** IP address, device's **WAN IP** address, device's **Netmask** and the **DNS** IP address that the VPN Internet Gateway is using.

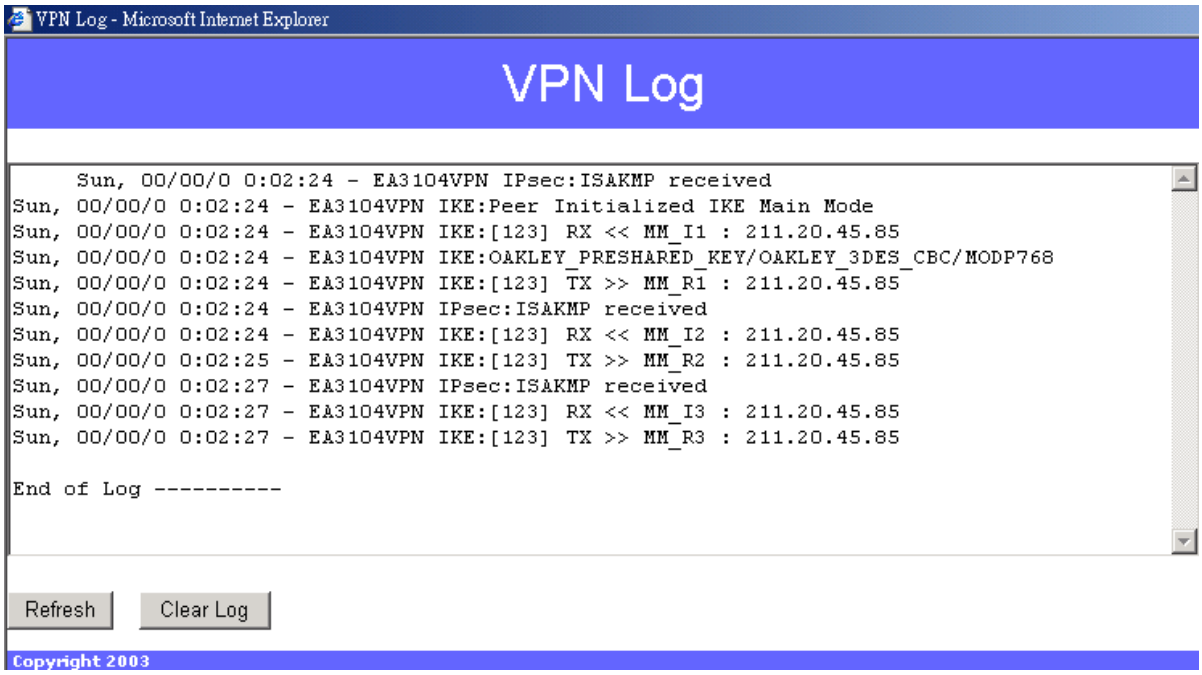
Parameter	Description
Release (Disconnect) and **Renew (Connect)**	You can manually disconnect/connect with your ISP for the WAN port (Cable/xDSL) Click the **Release (Disconnect)** button **-** the VPN Internet Gateway will disconnect with the ISP. Click the **Renew (Connect)** button - the VPN Internet Gateway will connect with the ISP.
Modem Dialup	The modem (asynchronous port) can be used as a backup Internet connection (dialup) for the Cable/xDSL connection or as an Internet access connection. If the current connection is via the backup modem, it will show "**Modem: Active**", otherwise it will show "**Not Active**".
Hang Up and **Dial Up**	You can manually disconnect/connect with your ISP for the asynchronous port (Dial Up/ISDN TA) If the **Modem Dialup** shows **Modem: Active**, clicking on the **Hang Up** button will DISCONNECT the asynchronous port's Internet connection. If the **Modem Dialup** shows **Not Active**, by clicking on the **Dial Up** button - the VPN Internet Gateway will ESTABLISH an Internet connection for the Gateway's asynchronous port.
Device IP	Shows the Device's: LAN **IP** address, private **LAN MAC** address and public **WAN MAC** address.
VPN Status	This screen displays the current connection status of your VPN connection(s). The VPN connection status shows the following information:

Status - Active/Inactive
Connection Name - name of the VPN connection
Remote IP, Virtual Network - remote site's Network (private network) IP
Interface, Type – encryption / authentication
State - phase 1 / phase2
TX pkts - transmitted packets
Rx pkts - received packets
UpTime - how long the connection has been established
Drop - click the Drop button to disconnect the VPN connection

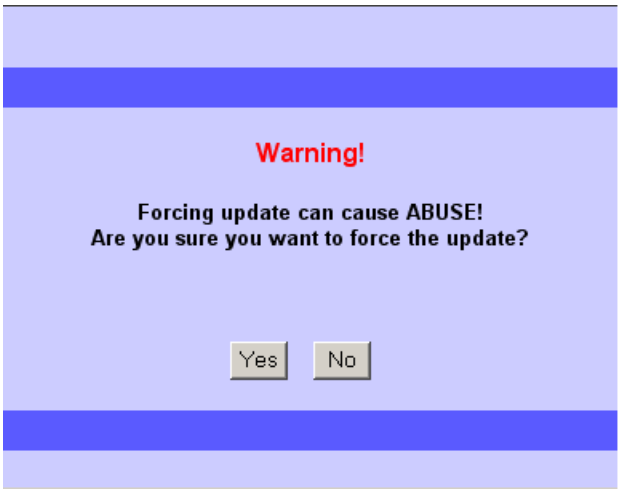


Parameter	Description
DHCP Log	Displays the DHCP clients logged to the Gateway's DHCP server. Click the **DHCP Log** button - the screen will display the DHCP client's information (DHCP client's: IP address, MAC address, IP address lease time).
VPN Log	This screen displays the VPN negotiation that occurred between the VPN Gateway and the remote devices. Click on **Refresh** – to update the latest information

Click on **Clear Log**– to clear the VPN log



Parameter	Description
Update DDNS	Click the Update DDNS button to manually update the IP address of your domain name (dynamic IP address for Gateway's WAN port). Note: DO NOT click the **Update DDNS** button too often. Some ISP's may perceive this as an attack and may disable your account.



Chapter 5: Advanced Settings

The **Advanced settings** section is where you can configure all the major features and functions of the VPN Internet Gateway. They include: DHCP Server Settings, Virtual Server Settings, Routing Settings, Filter Settings, Administration Settings, Dynamic DNS Settings, URL Filter Settings and E-Mail ALERT

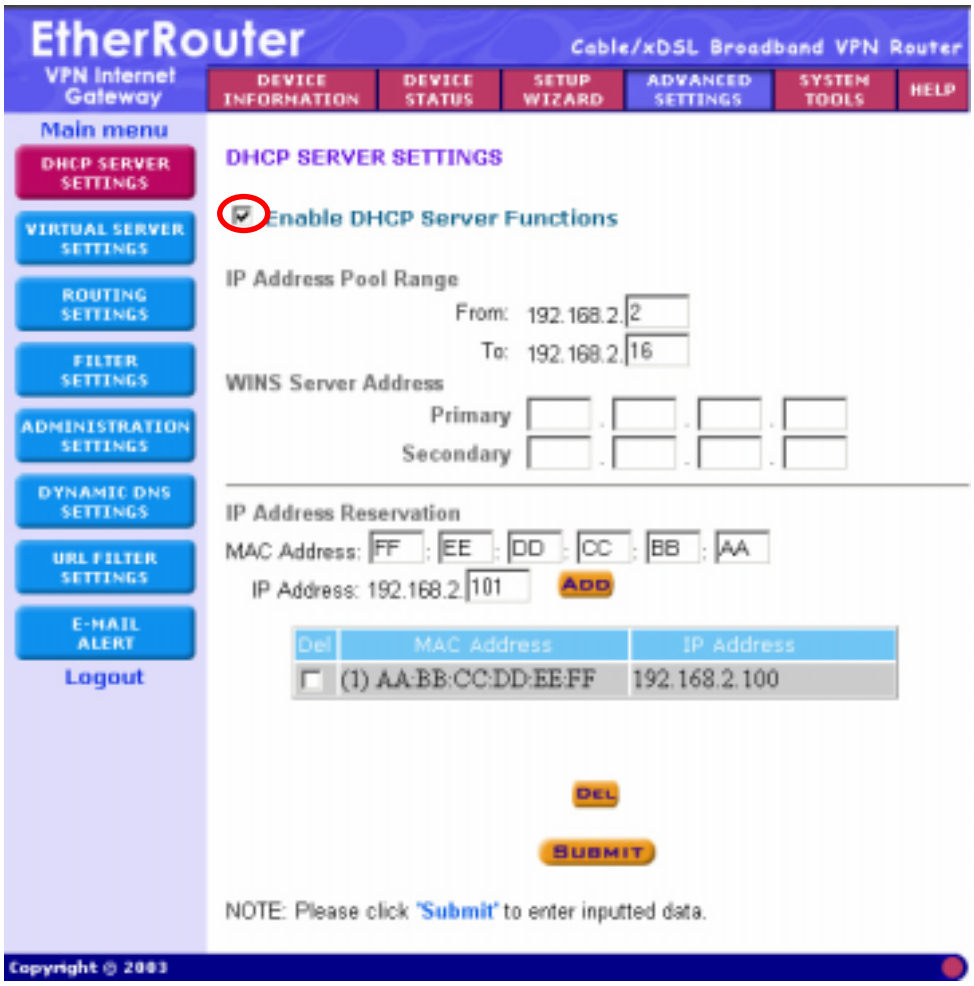
On the Menu Tool, click Advanced Settings.

Main Menu	Description
DHCP Server Settings	Provides centralization of all your LAN's network IP addresses
Virtual Server Settings	Allows remote access to Web, FTP, and other services on your network. The DMZ function allows full 2-way communication between a server on your LAN and the Internet
Routing Settings	Create a routing table so that the VPN Internet Gateway can route packets to different networks
Filter Settings	Create LAN or WAN filters to protect your network
Administration Settings	Allows you to configure the device's administrative settings such as passwords, etc.
Dynamic DNS Settings	Allows you to have a Web or other server behind a Dynamic IP address
URL Filter Settings	Filter web page request based on the web page's wording
E-Mail ALERT	Allows you to be alerted of any security infringements

Main Menu	Description
Logout	Logout or exit the VPN Internet Gateway's Web-based configuration

DHCP Server Settings

You can enable or disable the DHCP server. By enabling the DHCP server the router will automatically give your LAN clients an IP address. If the DHCP is not enabled then you'll have to manually set your LAN client's IP addresses. Make sure the LAN Client is on the same subnet as this VPN Internet Gateway if you want this VPN Internet Gateway to be your LAN client's default gateway.



Parameter	Description
Enable DHCP Server Functions	By default the VPN Internet Gateway's DHCP server is enabled. If you would like to disable the

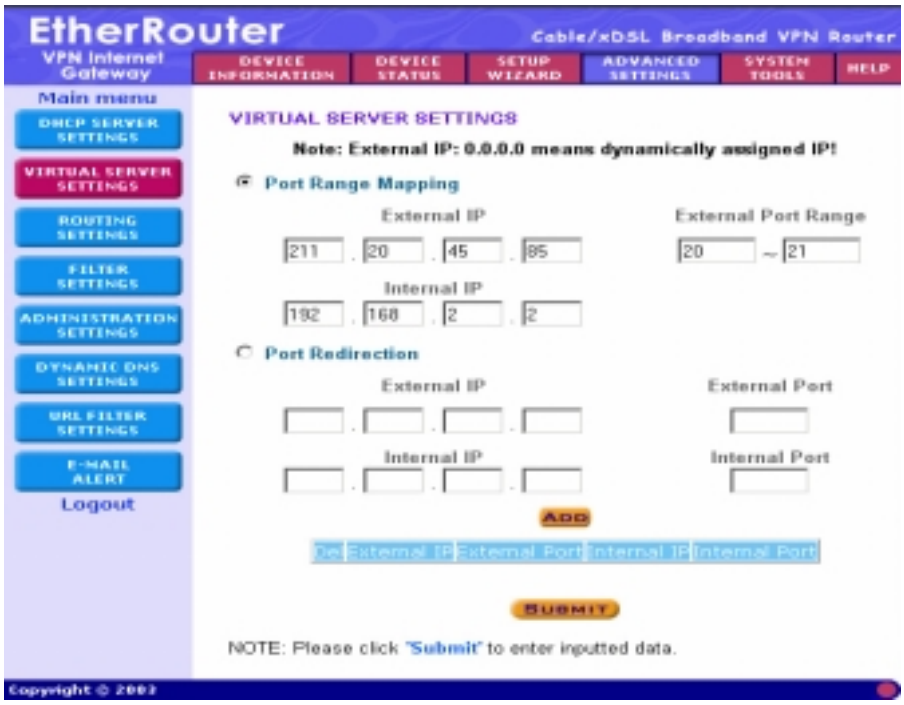
Parameter	Description
	DHCP server, unclick the Enable DHCP Server Functions box (marked **red -** see screen above)
IP Address Pool Range	The IP address pool contains the range of IP addresses that ill be used by the device's DHCP server to automatically assign IP addresses to your network clients. The Default IP address range is: From **192.168.2.2** to **192.168.2.100**
IP Address Reservation	The IP address reservation setting allows you to save fixed private IP address for specific computer/network clients. **MAC Address:** Enter the MAC address of the PC or server you wish to reserve an IP for. **IP Address** Enter the IP address that you want to reserve for the above MAC address. ***Add an IP address Reservation setting*** Click the **Add** button to add the configuration into the IP address reservation table. ***Delete an IP address Reservation setting*** Check the IP address reservation table's Del box and click the **DEL** button to delete a configuration.

Virtual Server Settings

Use the Virtual Server function when you want different servers/clients in your LAN to handle different service/Internet application types (e.g. Email, FTP, Web server etc.) from the Internet. Computers use numbers called port numbers to recognize a particular service/Internet application type. The Virtual Server allows you to re-direct a particular service port number (from the Internet/WAN Port) to a particular LAN private/internal IP address.

The **Virtual server settings** allow clients on the Internet to access certain services on your LAN via the Internet. Use the Virtual Server function to access a Web, FTP or a Telnet server etc. on your LAN via the Internet.

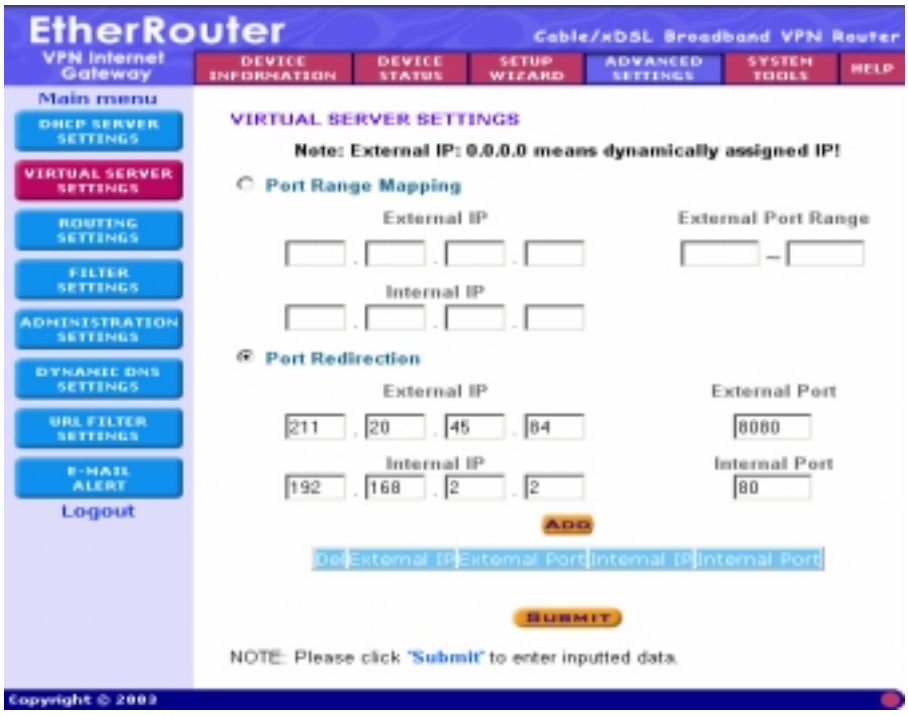
The **Port Range Mapping** allows you to re-direct a particular service port number (from the Internet/WAN Port) to a particular LAN private/internal IP address.



Parameter	Description
External IP	Enter the WAN IP address which allows a remote user to access. **Note:** You can leave the field to 0.0.0.0 to represent the router's WAN IP address assigned by the ISP.
Internal IP	Enter the LAN server/host IP address to which the requested services from the Internet will be sent to **Note:** You need to give your LAN server/host a fixed/static IP address for the Virtual Server to work properly.
External Port Range	Enter the port numbers range of the services (requests from the Internet) that will be sent to the Internal IP address (Specified above).

Note: If you only want one service port number e.g. 80 (HTTP) for the specified Internal IP address then enter 80 in both the service port range's boxes.

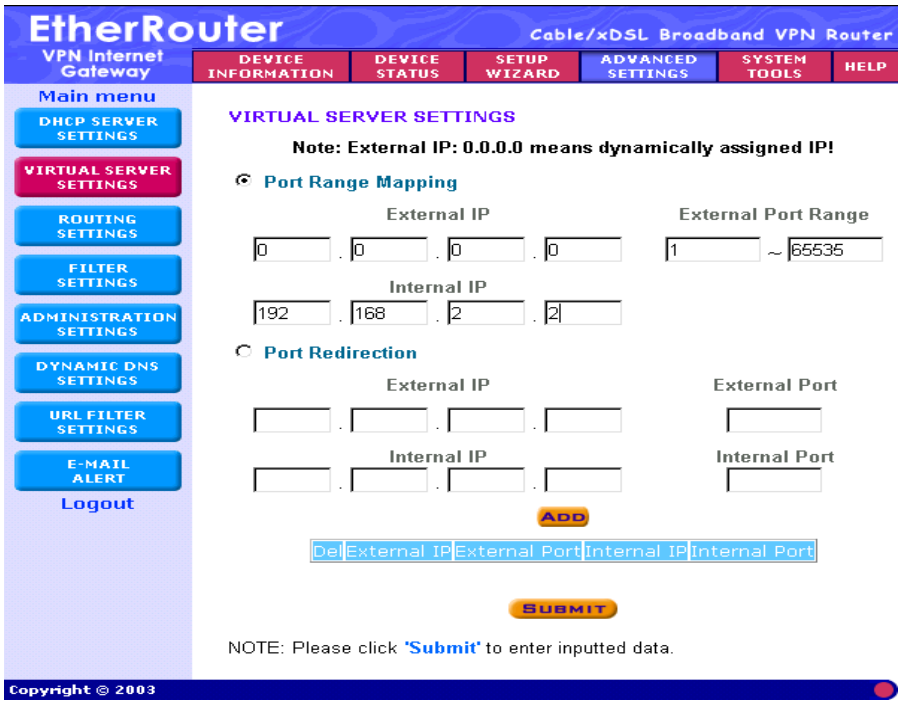
The **Port Redirection** function allows you to re-direct a specific service port number (from the Internet/WAN Port) to LAN private/internal IP address.



Parameter	Description
External IP	Enter the WAN IP address which allow remote user to access. **Note:** You can leave the field to **0.0.0.0** when the WAN IP has been auto assigned.
External Port	Enter the port numbers of the services (requests from the Internet) that will be sent to the Internal IP address
Internal IP	Enter the LAN server/host IP address that the service requests from the Internet will be sent to. **Note:** You need to give your LAN server/host a fixed/static IP address for the Virtual Server to work properly.

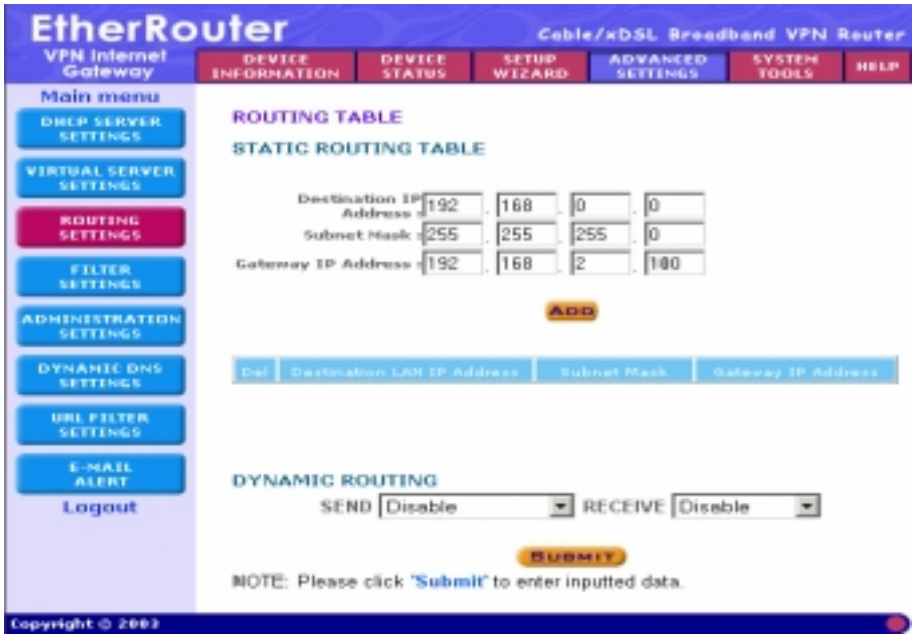
Parameter	Description
Internal Port	Enter the port numbers of the services that will be sent to the Internal IP address.

The **DMZ** function re-directs all packets (regardless of services) going to your WAN IP address to a particular LAN client/server. If you would like to enable the DMZ function, enter the **External Port Range** from 1 to 65535. The value **'0'** means that the WAN IP address is auto assigned.



RoutingSettings

The **Static routing settings** allow the VPN Internet Gateway to route IP packets to another network (subnet). The routing table stores the routing information so that the VPN Internet Gateway knows where to redirect the IP packets.



Parameters	Description
Destination IP Address	Enter the destination IP address of the remote network to which you want to assign a static route.
Subnet Mask	Enter the subnet mask of your network IP address.
Gateway IP Address	Enter the IP address of the interface (LAN/WAN port) linked to the remote network (Destination IP address). ***Add a Static Routing setting*** Click the **Add** button to add the configuration into the *Static Routing table*. ***Delete a Static Routing setting*** Check the *Static Routing table's* **Del** box and click the **DEL** button to delete a configuration.
Dynamic routing settings	Allows the VPN Internet Gateway to route IP packets to another network automatically (dynamically). The RIP protocol is used to do the dynamic routing. RIP communicates routing

information with other routers periodically.

SEND Optional **-** choose the routing protocol (routing information) that you wish to transmit to other routers on your network.

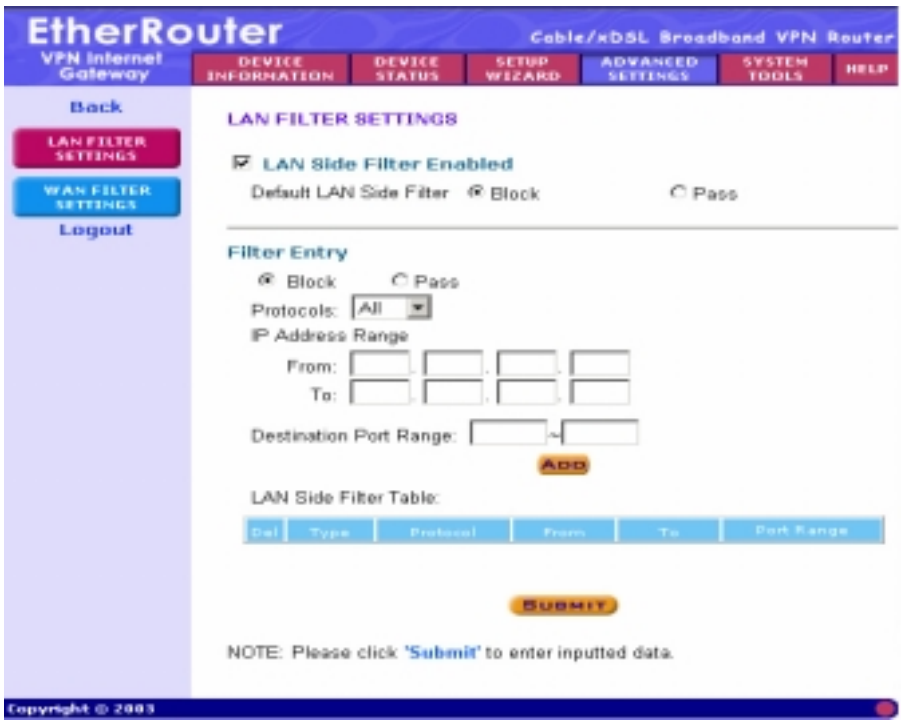
RECEIVE Optional **-** choose the routing protocol (routing information) that you wish to receive from other routers on your network.

NOTE: Click the **SUBMIT** button to input/save the configuration into the Gateway

---

Filter Settings

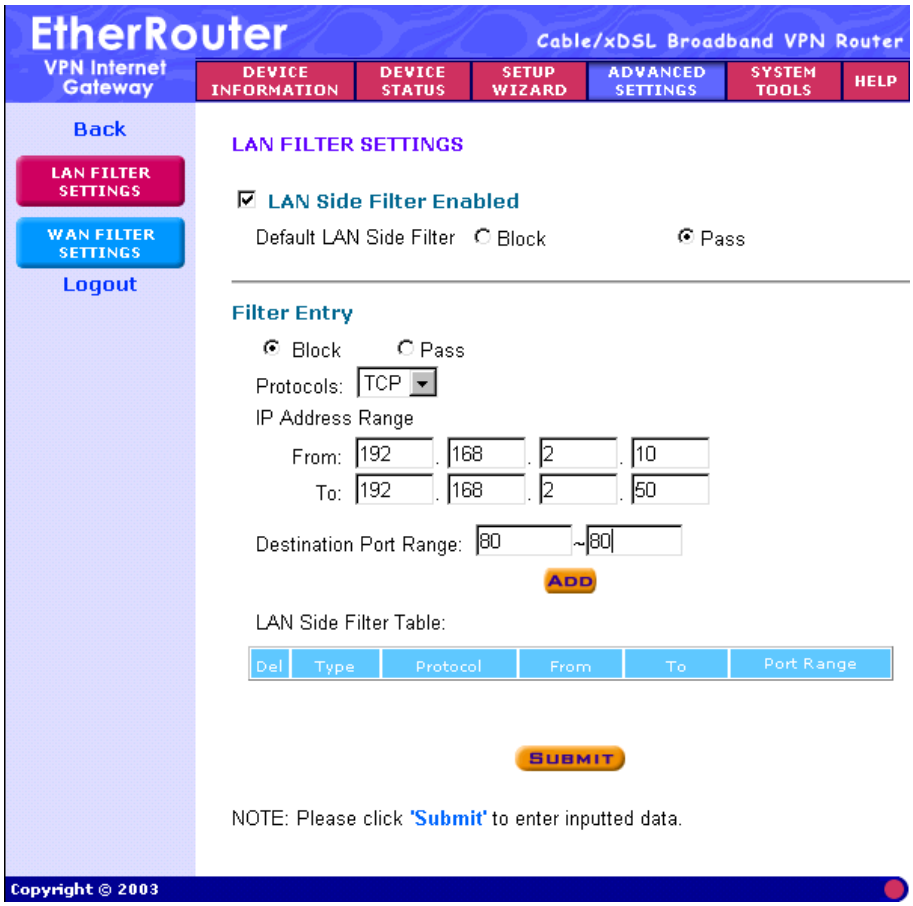
The Filter Settings is divided into **LAN Filter Settings** and **WAN Filter Settings**



Menu	Description
LAN Filter Settings	The **LAN Filter Settings** allow the administrator to define whether a local user is permitted to access the Internet.
WAN Filter Settings	The **WAN Filter Settings** allow the administrator to define whether a remote/outside user(s) is permitted to access the private local area network.

Filter Settings: *LAN Filter Settings*

The **LAN Filter Settings** allow the administrator to define whether a local user is permitted to access the Internet. To activate this feature, check **LAN Side Filter Enabled** and then define a filtering policy. To define a filtering policy: enter the IP address range, enter the network port number and select the transport protocol(s).



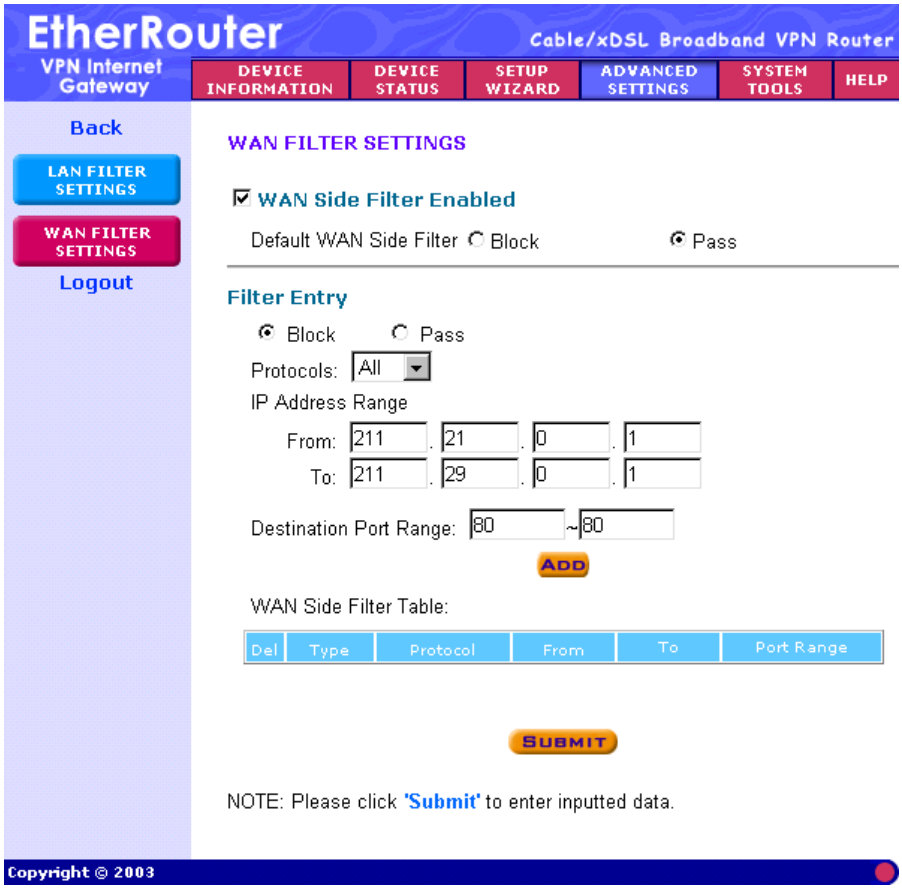
Parameter	Description
LAN Side Filter Enabled	You must select whether to enable (Yes) or disable (No) the filter function that you've configured in this screen
Default LAN Side Filter	Select to Block or Pass your regular LAN clients
Filter Entry	Select to Block or Pass LAN clients specified in this Filter Entry
Protocol	Select the Transport protocol type **(TCP** or **UDP**) for the **Destination Port Range** (below) that will be filtered
IP Address Range	Enter the LAN IP address range that you wish to apply this filter rule to. These are the LAN users' IP addresses that you wish to apply this filter rule to. If you only want to specify one IP address for this filter rule then enter the same IP address in both the **From** and the **To** box. **Note:** You need to give your LAN PC clients a fixed/static IP address for the filter rule to work properly.
Destination Port Range	Enter the Internet application/service (port number range) for the above IP address range that you wish to apply this filter rule to. If you only want to specify one service port then input the same service port in both boxes. **Add a Filter Entry setting** Click the **Add** button to add the configuration into the *LAN Side Filter Table*. **Delete a Filter Entry setting** Check the *LAN Side Filter Table's* **Del** box and click the **DEL** button to delete a configuration.

For example, to prevent local users with IP addresses (ranging from **10** to **50**) from accessing websites (HTTP service - port **80**), the settings are as follow:

LAN Side Filter Enabled: **Enabled**
Default LAN Side Filter: **Pass**
Filter: **Block**
Protocol: **TCP**
IP Address Range: **10** ~ **50**
Destination Port Range: **80 ~ 80 (HTTP)**

Filter Settings: *WAN Filter Settings*

The **WAN Filter Settings** allow the administrator to define whether a remote/outside user(s) is permitted to access the private local area network. To activate this feature, check **WAN Side Filter Enabled** and then define a filtering policy. To define a filtering policy: enter the IP address range, enter the network port number and select the transport protocol(s).



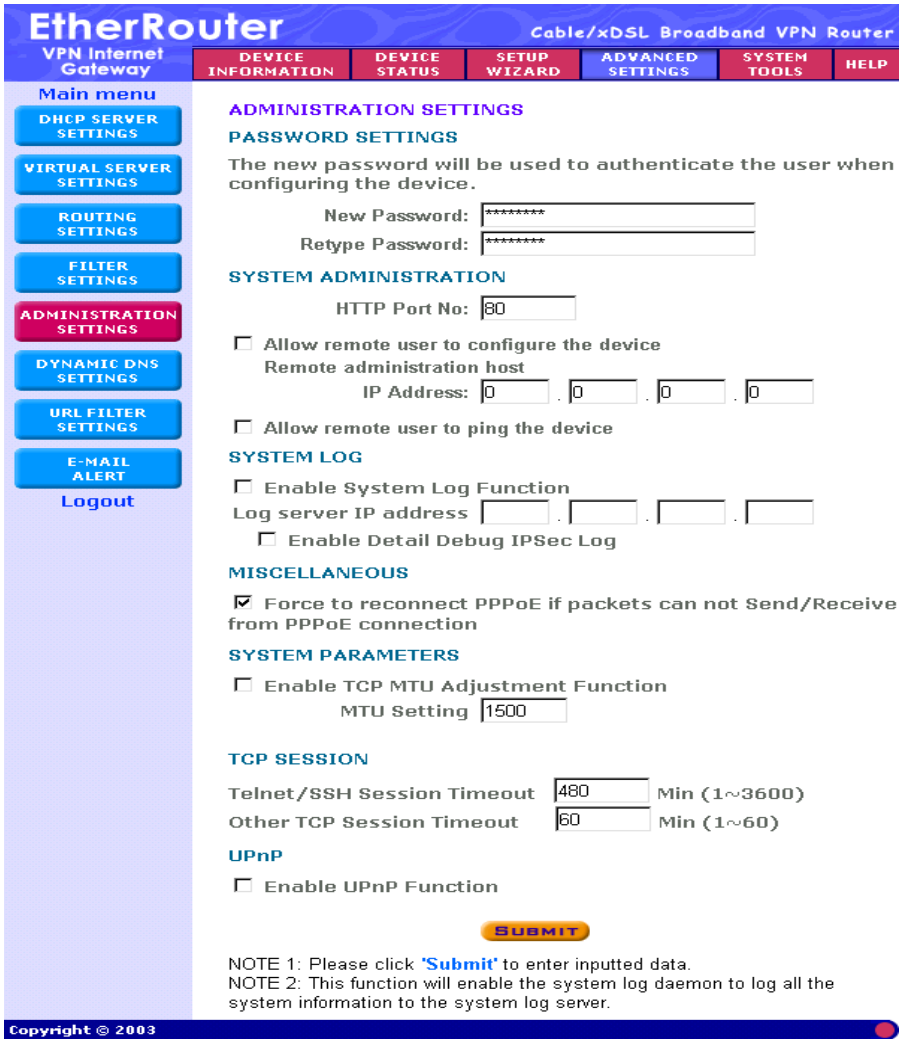
Parameter	Description
WAN Side Filter Enabled	You must select whether to enable (Yes) or disable (No) the filter function that you've configured in this screen
Default WAN Side Filter	Select to Block or Pass your regular WAN users
Filter Entry	Select to Block or Pass WAN clients specified in this Filter Entry
Protocol	Select the Transport protocol type (**TCP** or **UDP**) for the **Destination Port Range** (below) that will be filtered
IP Address Range	Enter the (Public) IP address range that you wish to apply this filter rule to. These are the external users' IP addresses that you wish to apply this filter to. If you only want to specify one external IP address for this filter rule then enter the same IP address in both the **From** and the **To** box. **Note:** WAN clients must have a fixed/static Public IP address for the filter rule to work properly.
Destination Port Range	Enter the Internet application/service (port number range), for the above **IP address range**, that you wish to apply this filter rule to. If you only want to specify one service port then input the same service port in both the boxes. **Add a Filter Entry setting** Click the **Add** button to add the configuration into the *WAN Side Filter Table*. **Delete a Filter Entry setting** Check the *WAN Side Filter Table's* **Del** box and click the **DEL** button to delete a configuration.

For example, to prevent remote users with IP addresses (ranging from 211.21.0.1 to 211.29.0.1) from accessing your LAN's virtual Web server (port 80), the settings are as follow:

WAN Side Filter Enabled: **Enabled**
Default WAN Side Filter: **Pass**
Filter: **Block**
Protocol: **ALL**
IP Address Range: **211.21.0.1 to 211.29.0.1**
Destination Port Range: **80 ~ 80 (HTTP)**

Administration Settings

The Administration Settings section allows you to configure the device's: Password settings, System Administration, System Log, System Parameters, UPnP and TCP session.



Parameter	Description
PASSWORD SETTINGS	You can setup the VPN Internet Gateway so that a password is required, in order to access its

web-based configuration pages. This password will be required the next time you want to configure the VPN Internet Gateway. To setup a password, type your password in the **New Password** field and type it again in the **Retype Password** field to reconfirm.

Note: It is important to remember your password. If you lose or forget your password, press the small **reset button** located on the back of the device for 5~6 seconds. The Reset action will reset the device to the factory default settings. In factory default, the user name is **admin** and there is **NO** password

SYSTEM ADMINISTRATION

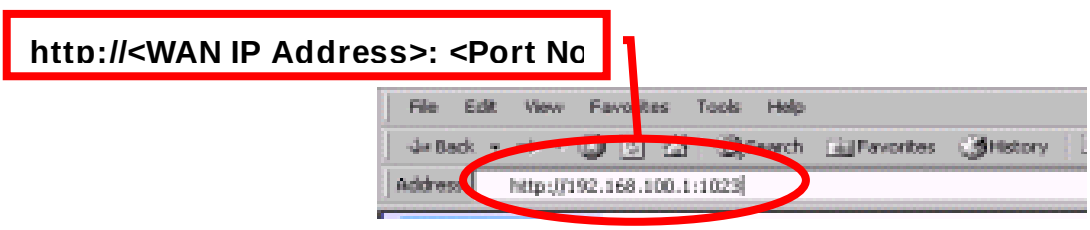
This allows remote user(s) to configure and manage the VPN Internet Gateway from a remote site (through the Internet).

The default value of the **HTTP port No** is **80**. You can select a different port number to do the remote web-based configuration

The default IP address of the **Remote administration host** is: **0.0.0.0**. (**IP address** 0.0.0.0 means that any remote PC can access and manage the VPN Internet Gateway from a remote site). Either specify an IP address for the remote administrator or leave it as the default.

SYSTEM ADMIN

You will have to enable the **Allow remote user to configure the device** to use the remote web-based configuration function. Once you have enabled this function, type the device's WAN IP address and the HTTP port No **(e.g. http://202.19.100.1:1023)** into the browser of the specified remote administrator.



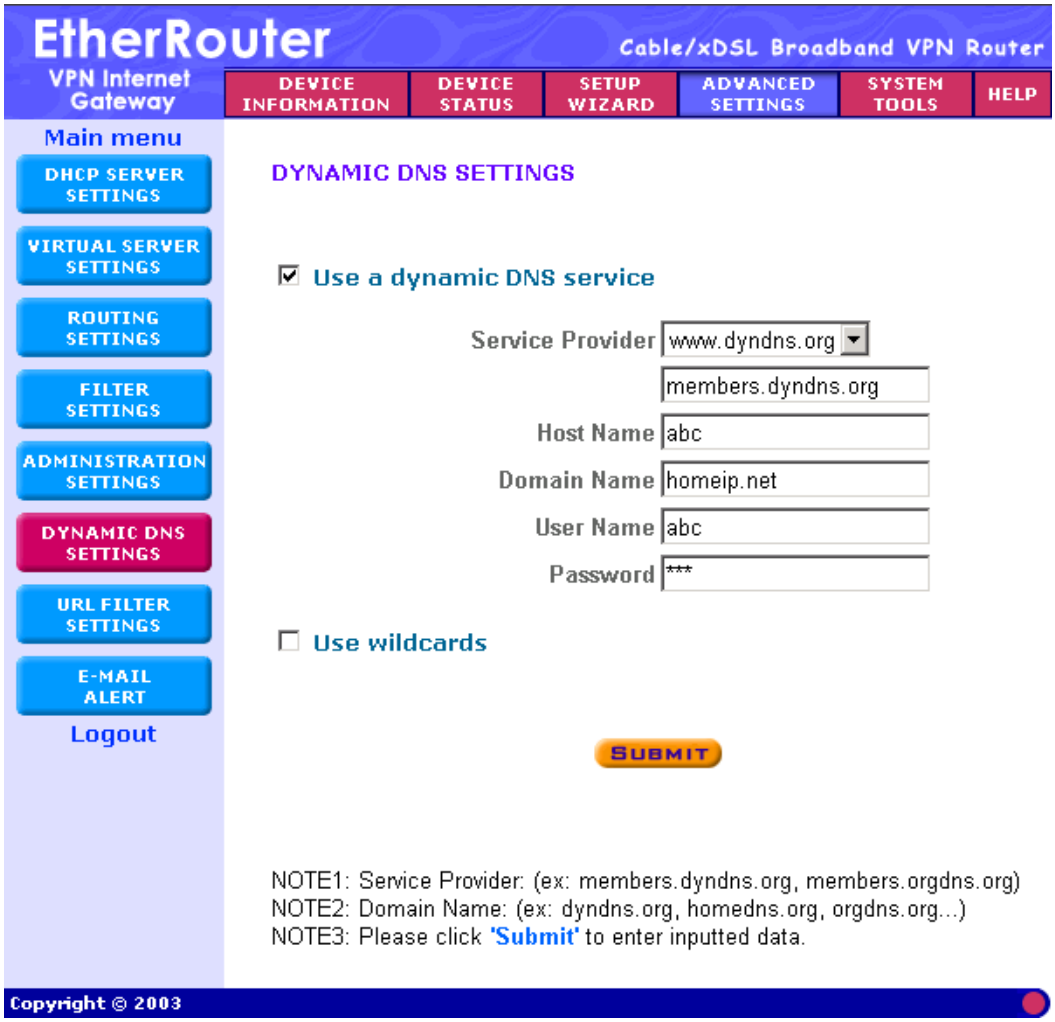
Parameter	Description
	If the HTTP port number, **is NOT the default PORT No. 80**, then the LAN administrator must also enter the new port number, specified in **HTTP port No**, in order to access the device's web-based configuration, **e.g. Device LAN IP address with HTTP port no 1023 (http://192.168.2.1:1023)** **Allow remote user to ping the device**: If you enable this function – the device will respond to any pings it gets from the Internet. If you disable this function, the device will not respond to any ping requests.
SYSTEM LOG	The System Log function allows the administrator to assign an IP address to a server on which a log server is running. When a particular event occurs, the router will send a notification to the log server. The log server can then present the log to the administrator. [Free log server can be downloaded from Internet, such as Kiwis SysLog Daemon]
Miscellaneous	Some ISPs require you to force a PPPoE re-connection, when the Internet connection cannot send or receive packets.
System Parameter	The System Parameter allows you to set the MTU value (Maximum Transmission Unit) for your Internet connection. If you would like to enable the MTU setting – check the box. The default MTU value is 1500 bytes. Some ISPs restrict the packet size for a PPPoE connection. Use the system parameter to change the MTU to cater to your ISP's connection requirement.

Parameter	Description
UPnP	The Universal Plug and Play (UPnP) function allows Windows XP to automatically configure the router to cater to various Internet applications (such as games and videoconferencing).

NOTE: Click the **SUBMIT** button to input/save the configuration into the Gateway

DynamicDNS Settings

The Dynamic DNS (DDNS) service allows Web or other servers, with a dynamic IP address, to be accessible from the Internet. This means that even if your VPN Internet Gateway has a dynamic WAN IP address, Internet users can still access your web server (domain name) in your LAN.



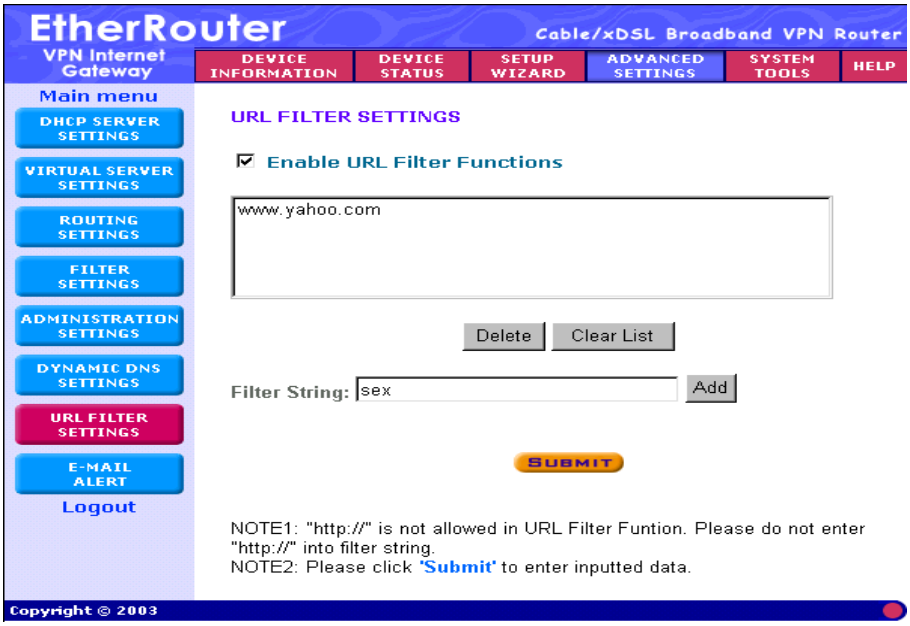
If you would like to use the DDNS function, you will have to register with a DDNS service provider, and enter the following information provided by the DDNS service provider:

Parameter	Description
Use a dynamic DNS Service	Click on this box to enable the DNS service function
Server	Select the DDNS service provider that you have registered with.
Host Name	Enter the host name of your DDNS account
User Name	Enter the user name of your DDNS account.
Password	Enter the password of your DDNS account.
Use wildcards	If you use DYNDNS as your DDNS service provider, you can enable the **Use wildcards** feature. The **wildcards** feature - any URL request that contain your domain name (e.g. www.router.com), as part of its URL domain name (e.g. http://broad/router.com) request, will be given your dynamic IP address.

NOTE: Once you have filled in the above information, click the **SUBMIT** button to input/save the configuration into the Gateway

URL Filter Settings

The **URL Filter** settings prevent users from accessing certain websites on the Internet. The router can block sites based on specific words or letters. Sites will be blocked if any of these words or letters is part of the website's name (URL) or newsgroup name.



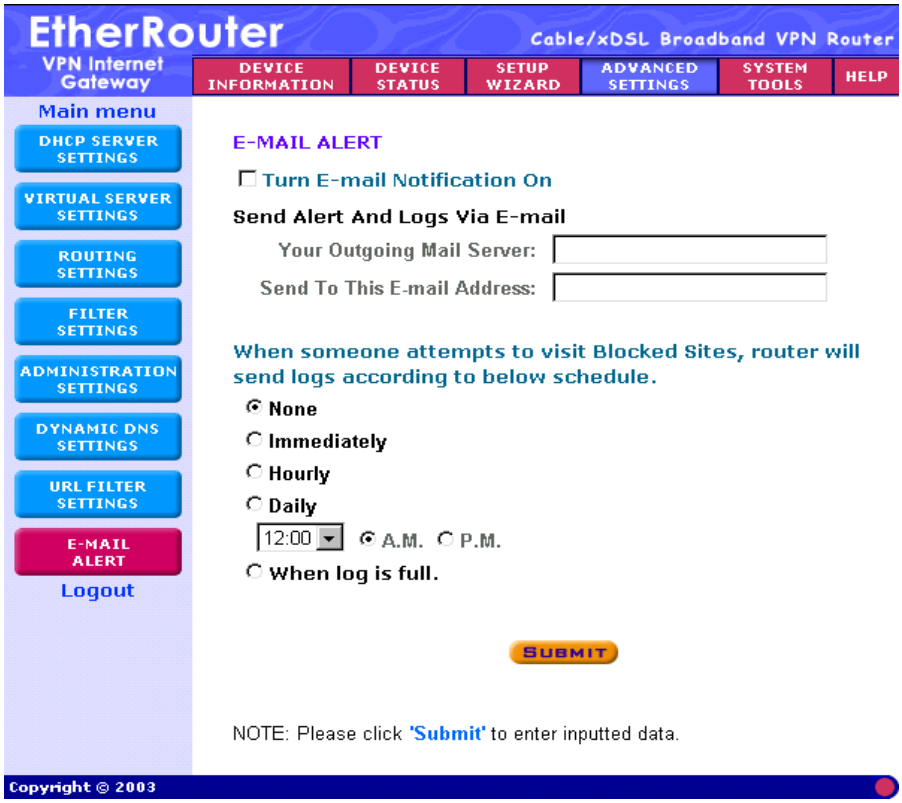
Parameter	Description
Enable URL Filter Functions	Click on this box to enable the URL filtering function
Filter String	The VPN Internet Gateway will block any web page requests that have words or letters specified here. **NOTE:** **DO NOT** enter "http://" into the filter string

NOTE: Click the **SUBMIT** button to input/save the configuration into the Gateway

E-Mail ALERT

Your router can periodically email you a log of security-related events (such as denied incoming service requests and administrator logins).
The router can also email you an immediate alert when it detects a significant security incident, such as: a known attack directed at your IP address, a computer on the Internet scanning your IP address for any open ports and someone on your LAN trying to visit a blocked site.

Fill out the settings on the screen below if you would like to have alerts and logs sent to you by e-mail.



Parameter	Description
Turn E-mail Notification On	Check this box to enable the E-Mail alert function
Send Alert And Logs Via E-Mail	
Your Outgoing Mail Server	Enter Your E-Mail account's Outgoing Mail Server
Send To This E-Mail Address	Enter the E-Mail account that you wish the alert to be sent to.
When someone attempts to visit Blocked Sites, router will send logs according to below schedule.	
None	The router will not send any alerts at all
Immediately	The router will send an alert immediately after an incident has occurred to the E-Mail specified above.

Parameter	Description
Hourly	The router will send an alert once every hour to the E-Mail specified above.
Daily	The router will send an alert once a day to the E-Mail specified above. You can specify the exact time from the drop down menu
When log is full	The router will send an alert to the E-Mail specified above only when the log is full.

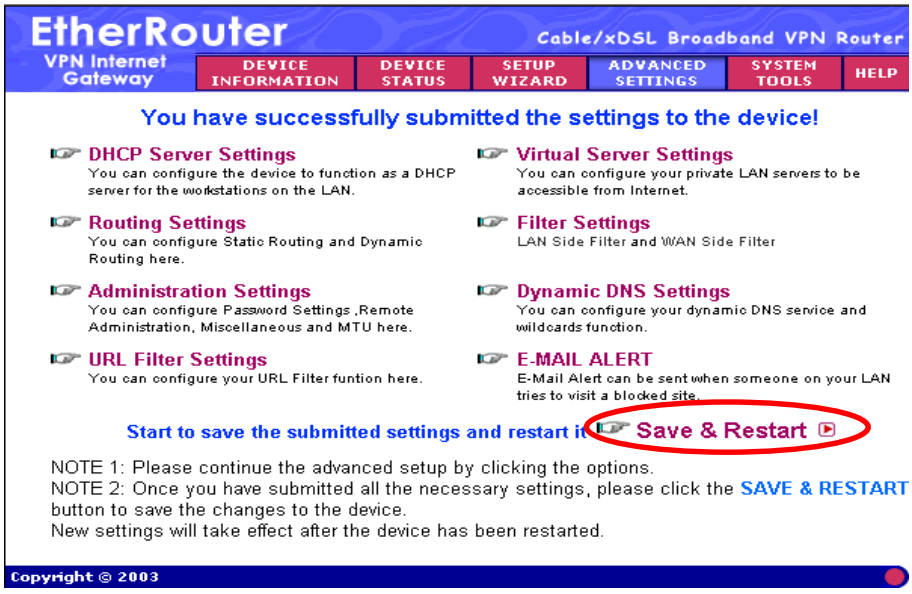
NOTE: Click the **SUBMIT** button to input/save the configuration into the Gateway

Save & Restart

Save & Restartlets you save the inputted settings to the VPN Internet Gateway and then restarts (reboots) the device.

When you have finished making all the changes on the various pages (above) on chapter 5, please **click Save & Restart**o save the settings and to restart the device. If you would like to configure the setting(s) again, click on a function (see screen below), this will link you to that particular functions configuration screen.

After the device restarts (reboots), the device will function according to the saved settings.


EtherRouter
VPN Internet Gateway
Cable/xDSL Broadband VPN Router
DEVICE INFORMATION
DEVICE STATUS
SETUP WIZARD
ADVANCED SETTINGS
SYSTEM TOOLS
HELP
You have successfully submitted the settings to the device!
DHCP Server Settings
You can configure the device to function as a DHCP server for the workstations on the LAN.
Virtual Server Settings
You can configure your private LAN servers to be accessible from Internet.
Routing Settings
You can configure Static Routing and Dynamic Routing here.
Filter Settings
LAN Side Filter and WAN Side Filter
Administration Settings
You can configure Password Settings ,Remote Administration, Miscellaneous and MTU here.
Dynamic DNS Settings
You can configure your dynamic DNS service and wildcards function.
URL Filter Settings
You can configure your URL Filter funtion here.
E-MAIL ALERT
E-Mail Alert can be sent when someone on your LAN tries to visit a blocked site.
Start to save the submitted settings and restart it
Save & Restart
NOTE 1: Please continue the advanced setup by clicking the options.
NOTE 2: Once you have submitted all the necessary settings, please click the SAVE & RESTART button to save the changes to the device.
New settings will take effect after the device has been restarted.
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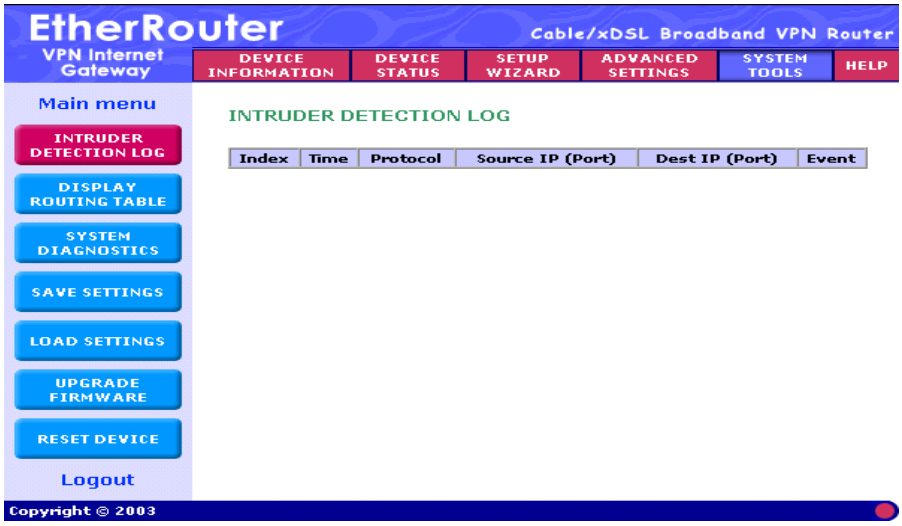
Chapter 6: System Tools

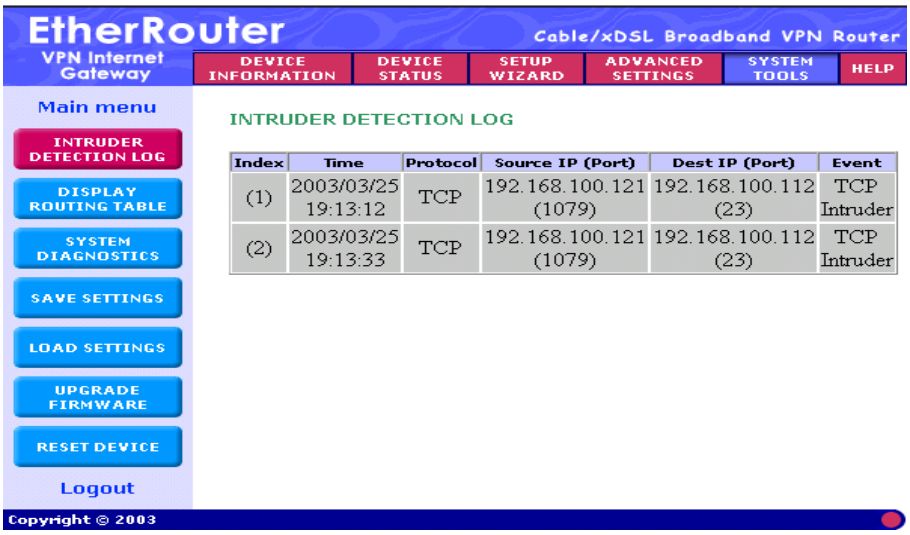
The System Tools section displays and detects the status of the VPN Internet Gateway. The System Tools 7 sections are briefly described below:



Main Menu	Description
Intruder Detection Log	Displays any possible Hacker attacks that may have occurred to the VPN Internet Gateway
Display Routing Table	Displays the device's current static routing configuration
System Diagnostics	Displays the device's current configuration and Diagnostics information
Save Settings	Allows you to save the device's current configuration to a file
Load Settings	Allows you to load the factory default settings or files of previously saved configurations into the device.
Upgrade Firmware	Allows you to upgrade the latest firmware into the device.
Reset Device	Allows you to restart/reboot the device.

System Tools: Intruder Detection Log

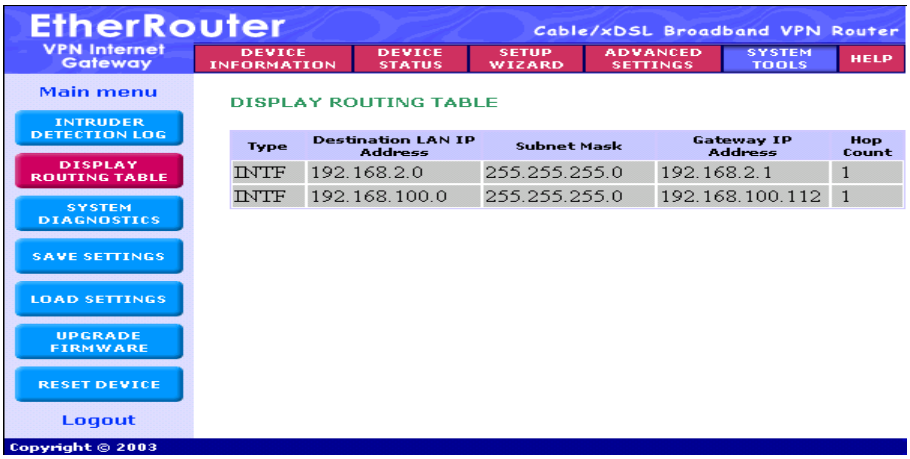
The Intruder Detection log displays the possible hacker attacks that may have occurred to the VPN Internet Gateway. Up to 32 hacker attacks may be logged/listed. Below is an explanation of the Intruder Detection log display.



Parameter	Description
Index	Lists up to 32 Intruder detection logs
Time	The time in which the attack occurred
Protocol	The attack's protocol type (TCP/UDP)
Source IP (Port)	The source IP address and source Port number of the attack
Dest IP (Port)	The destination IP address and destination Port number of the attack
Event	The type of attack

System Tools: Display Routing Table

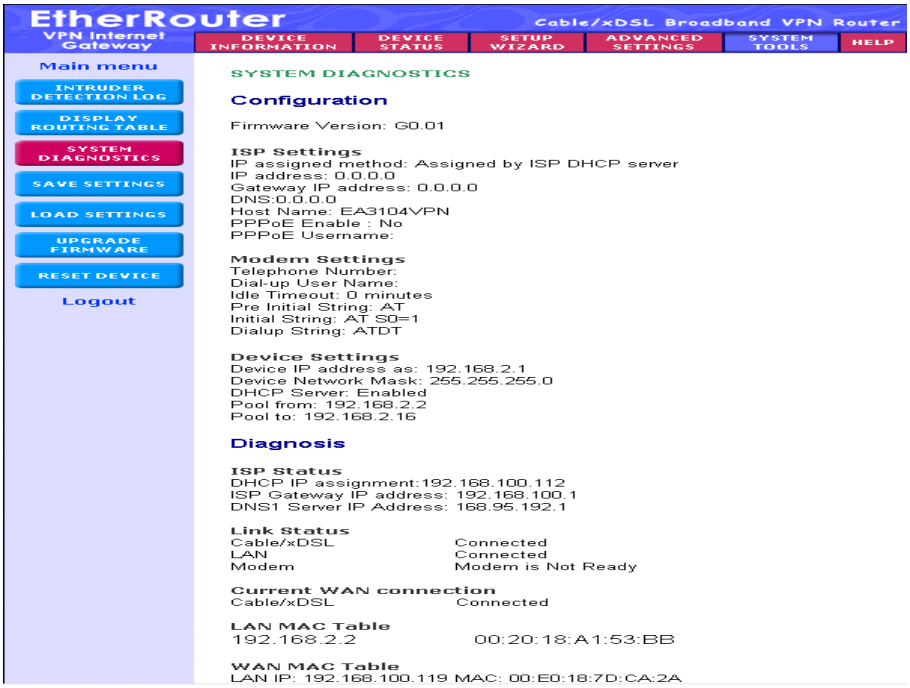
The routing table screen below displays the device's current static routing configuration that was configured in the Routing Settings (see chapter 5 - Routing Settings - for more details).



System Tools: System Diagnostics

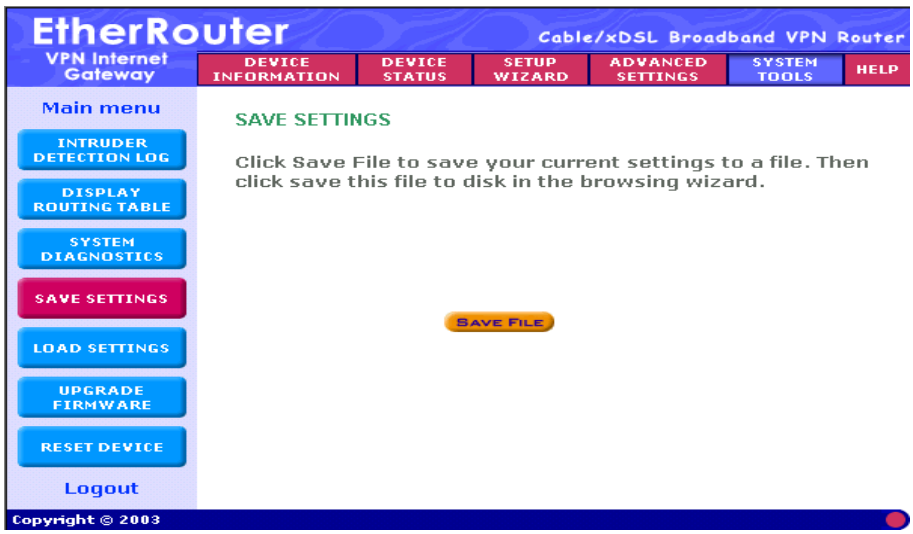
The System diagnostics screen shows the device's configuration information. It also displays the device's current status.

Parameter	Description
Configuration	Displays the device's current **firmware version**, **ISP settings** (Internet connection details), **Device Settings**(VPN Internet Gateway's LAN information)
Diagnosis	Displays the VPN Internet Gateway's current: connection status and LAN/WAN information.



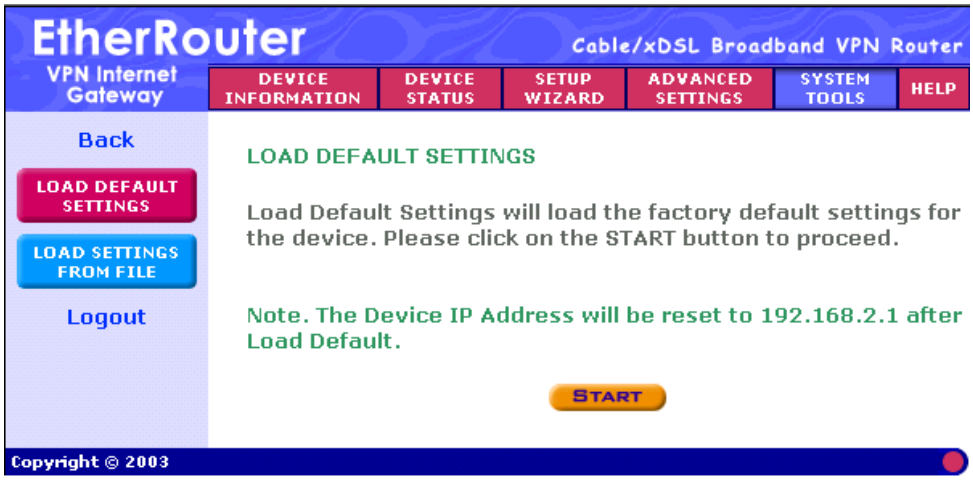
System Tools: Save Settings

The Save Settings screen allows you to save the device's configuration settings to a disk. Click **Save File** to save your current settings to a file. Then click save to save this configuration file to your disk. You can reload the saved configuration back into the Gateway in the **Load Settings** (System Tools) section.



System Tools: Load Settings

The Load Settings screen allows you to load the factory default settings to your device and load settings previously saved configuration files to your device. The Load Settings section consists of 2 sections as described below: **Load Default Settings** and **Load Settings From File**



Menu	Description
Load Default Settings	The **Load Default Settings** screen allows you into load the factory default settings to your device.
Load Settings From File	The **Load Settings From File** screen allows you to load a previously saved file into the device again.

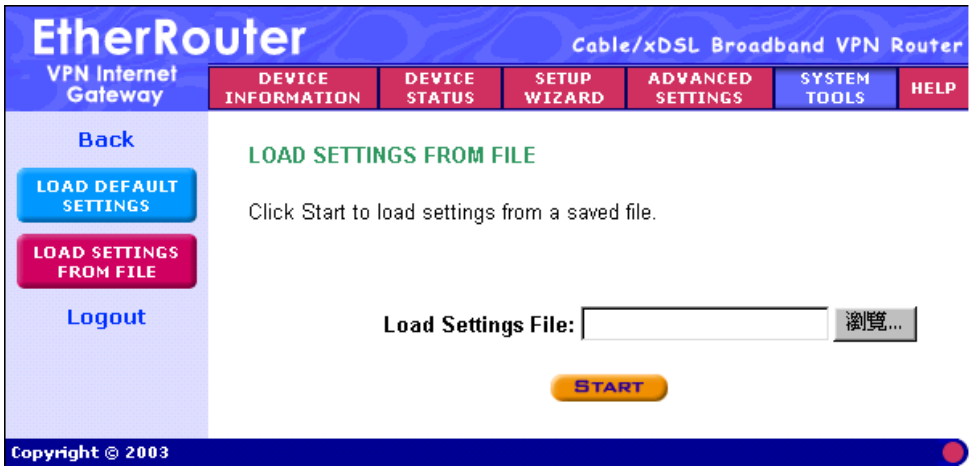
Upgrade Firmware: Load Default Settings

The factory default setting is the configuration when you first purchased the Gateway. Click the START button to start loading the factory default settings. Your previous configurations will be deleted.

Note: Load the factory default settings if you have forgotten the VPN Internet Gateway's password. The factory default user name is **admin** and there is NO password.

Upgrade Firmware: Load Settings From File

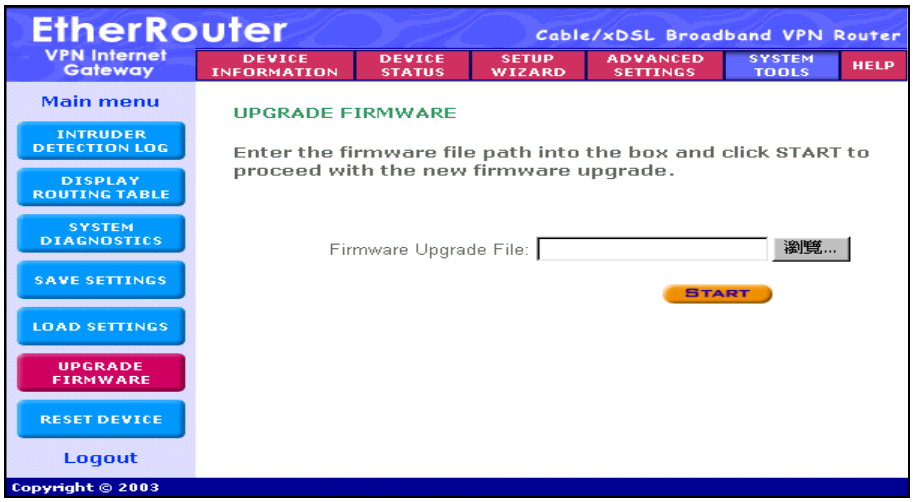
The load settings from file screen allows you to load a previously saved file to the device again.



Parameter	Description
Load Settings File	To load a previously saved configuration file into the Gateway again, you first need to enter the configuration file name and its path in the box provided. You can also use the Browse button to find the file. Once you have located the file's location, click **START** to start loading the saved configuration into the VPN Internet Gateway

System Tools: Upgrade Firmware

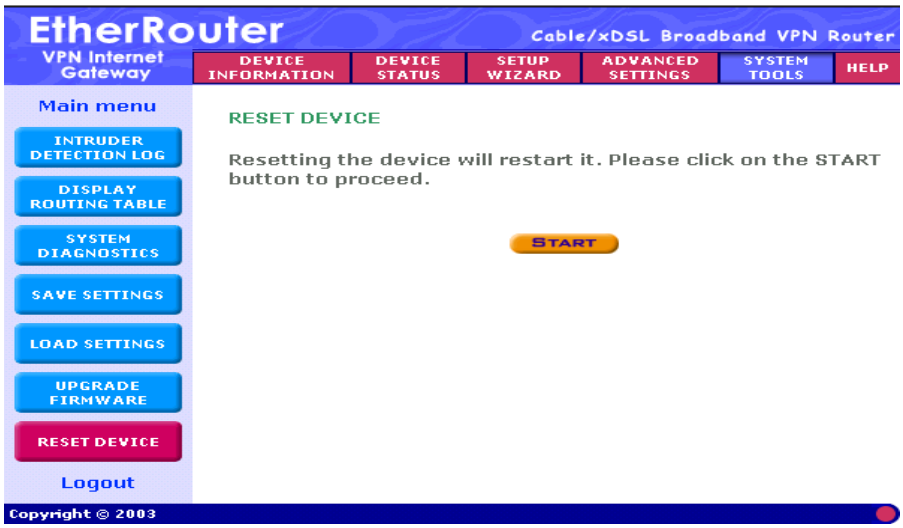
The upgrade firmware screen allows you to upgrade the latest firmware into your device.



Parameter	Description
Firmware Upgrade File	Enter the new firmware's file path into the box provided and click **START** to start upgrading the new firmware into the VPN Internet Gateway. You can also use the Browse button to find the new firmware file.

System Tools: Reset Device

Reset the Gateway if the Gateway stops responding correctly. **Your settings will not be changed.** The Reset Device screen allows you to essentially restart/reboot the device. Click on the **START** button to restart/reboot the device.



Chapter 7: Help

On the Main Menu Tool bar - click on the **Help** Menu if you seek further information about a certain function or if you would like to understand certain terminology used in the manual. This section provides a list of frequently asked questions and terminology.

Appendix

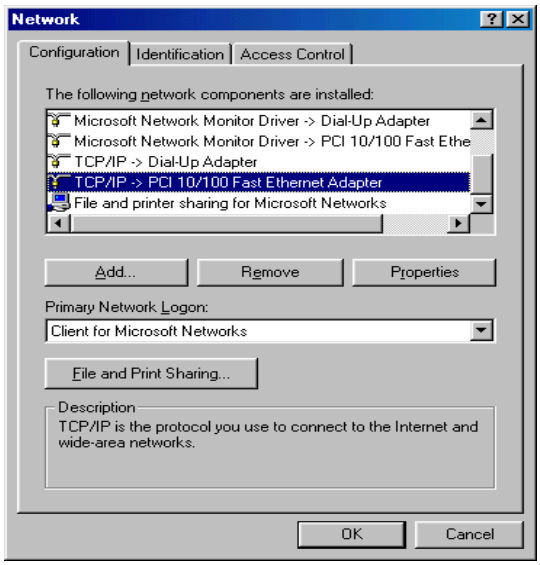
Configuring Your PC to "Obtain an IP automatically"

If you **do not** want to set a static IP address for your PC, you will need to configure your PC to request an IP address from the Gateway.

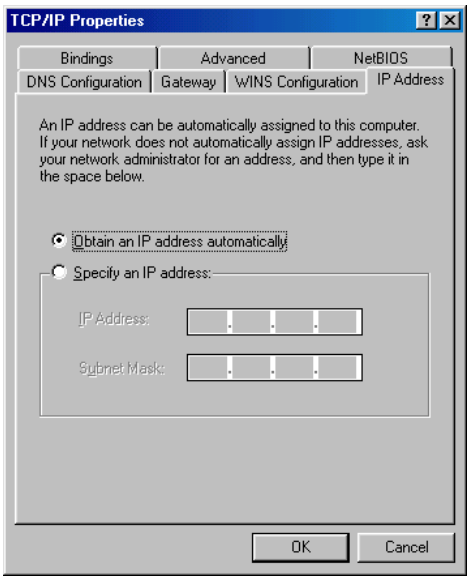
1. On your PC, click the **Start** button, select **Settings**, then select **Control Panel**

2. Double-click the **Network** Icon

3. In the **configuration** tab, select the **TCP/IP protocol line** that is associated with your network card/adapter. If there is no TCP/IP line listed, you will need to first install the TCP/IP protocol.

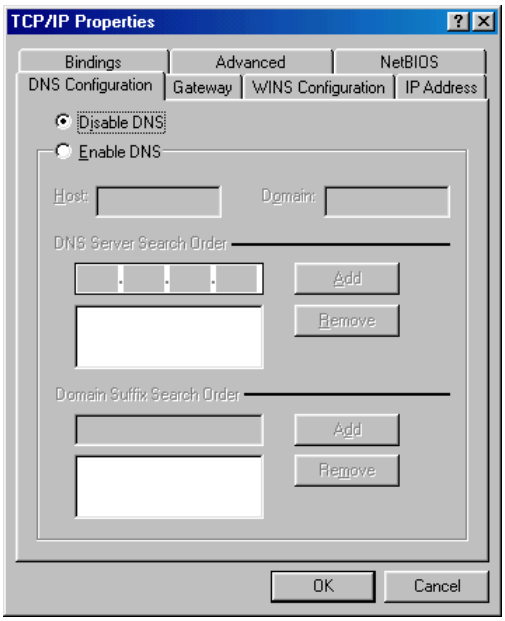


4. Click the **Properties** button, then choose the **IP ADDRESS** tab. Select **Obtain an IP address automatically**


TCP/IP Properties
Bindings
Advanced
NetBIOS
DNS Configuration
Gateway
WINS Configuration
IP Address
An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.
Obtain an IP address automatically
Specify an IP address:
IP Address:
Subnet Mask:
OK
Cancel

5. Then select the **DNS configuration** tab to add a **DNS IP address** If you do not wish to add a DNS IP address, you can select the **Disable DNS** function. Press **OK**. You have completed the client settings.

6. After clicking **OK**, windows might ask you to restart the PC. Click **Yes**.



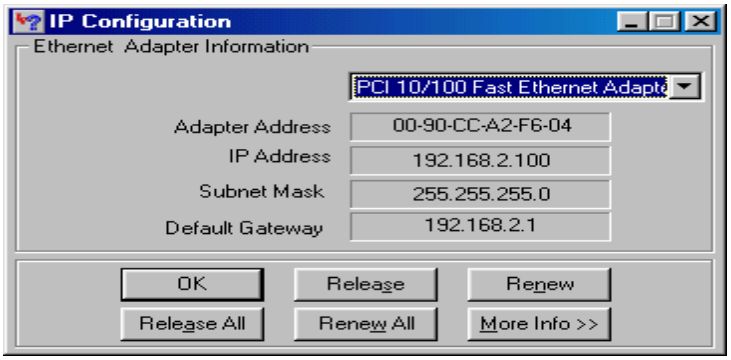
Viewing Your PC's Network Information

There are two tools for finding out a computer's IP configuration, MAC address and default gateway.

- **WINIPCFG (for windows 95/98)**

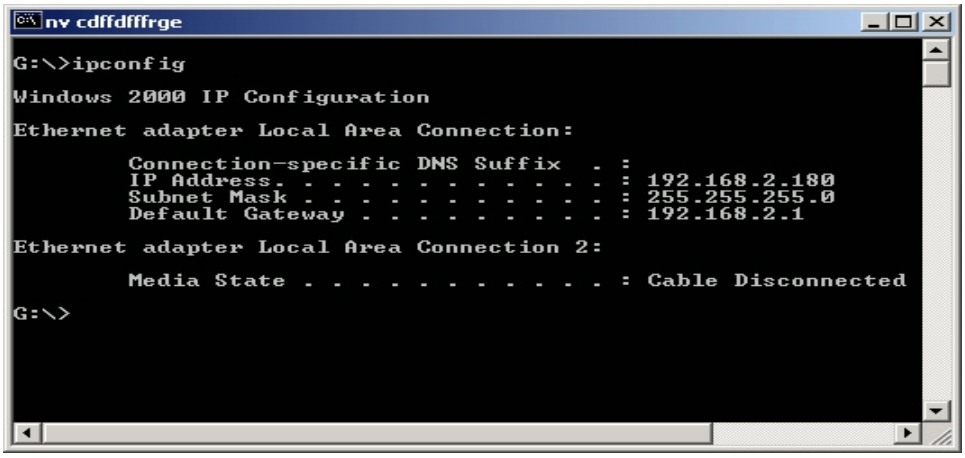
  Inside the windows 95/98 **Start** button, select Run and type **winipcfg** In the example below this computer has an IP address of 192.168.2.100 and the default gateway is 192.168.2.1. The default gateway should be the network (Router) device's IP address. The MAC address in windows 95/98 is called the Adapter Address.

Note: You can also type **winipcfg** in the DOS command.



- **IPCONFIG (for Windows 2000/NT)**

In the DOS command type **IPCONFIG** and press **Enter**. Your PC IP information will be displayed as shown below.


nv cdffdfffrge
G:\>ipconfig
Windows 2000 IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.2.180
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.2.1
Ethernet adapter Local Area Connection 2:
Media State . . . . . : Cable Disconnected
G:\>

VirtualPrivateNetwork(VPN) Examples

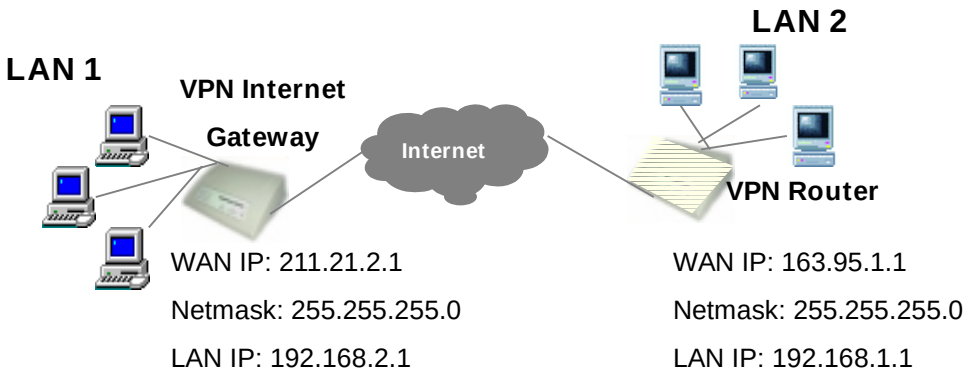
There are 2 types of VPN architectural topologies:

Topology 1: **LAN** - Network-to-Network

Topology 2: **Single User**- PC(s) to Network (mode 1 and 2)

Topology 1: LAN - Network-to-Network

This type of architecture creates a secure VPN tunnel between two networks, for instance, a VPN Internet Gateway (LAN 1) and a VPN Router (LAN 2) – see diagram below.



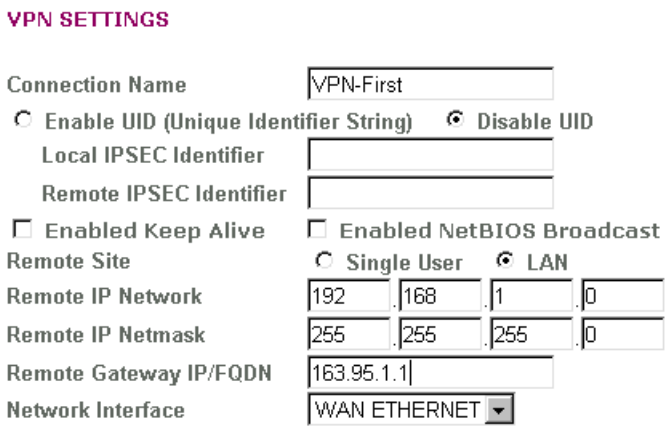
Configuration for VPN Internet Gateway (LAN 1)

Remote Site: LAN

Remote IP Network: 192.168.1.0

Remote IP Netmask: 255.255.255.0

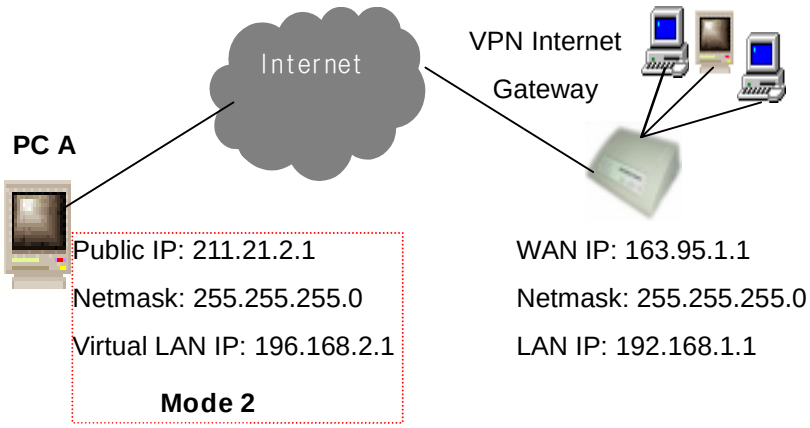
Remote Gateway IP/FQDN: 163.95.1.1



Note: In **IKE Mode**, if the Remote Gateway IP is dynamic, enter "0.0.0.0" in the **Remote Gateway IP/FQDN** field. In **Manual Mode**, you have to fill in the **Remote IP**, **Remote IP Network** and **Remote Gateway IP/FQDN** fields. (**Remote Gateway IP/FQDN** field cannot be 0.0.0.0.)

Topology 2: Single User PC(s) to Network (mode 1 and 2)

The diagram below is used to describe mode 1 and 2.



Mode 1:

PC A must have an IPSec Client software installed **(eg. Safenet or SSH etc.)**. If you do not know PC A's IP address, because it has a dynamic public IP, then the VPN Internet Gateway's VPN configuration is as follow:

Configuration for VPN Internet Gateway

Remote Site: Single User
Remote IP Network: 0.0.0.0
Remote IP Netmask: 0.0.0.0
Remote Gateway IP/FQDN: 0.0.0.0

NOTE: If you dont know the IP address (Remote IP Network) for PC A, input "0.0.0.0" in the Remote IP Network field, but the request for the VPN connection has to be initiated by PC A. If you select **Manual Mode**, you have to fill in the **Remote Gateway IP/FQDN**. (**Remote Gateway IP/FQDN** field cannot be 0.0.0.0).

Mode 2:

In this example, PC A is given a fixed IP address by its ISP. PC A must have an IPSec Client software installed **(e.g. VPNCOM – acts as a virtual NIC)**. The VPN Internet Gateway's VPN configuration is as follow:

Remote Site: Single User
Remote IP Network: 192.168.2.0
Remote IP Netmask: 255.255.255.0
Remote Gateway IP/FQDN: 211.21.2.1

Note: In **IKE Mode**, if the Remote Gateway IP has a dynamic IP address, you must enter "0.0.0.0" in the **Remote Gateway IP/FQDN** field. In **Manual Mode**, you must fill in the **Remote IP**, **Remote IP Network** and **Remote Gateway IP/FQDN** field (**Remote Gateway IP/FQDN** field cannot be 0.0.0.0 for manual mode).